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No. 70



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LABOR

LABOR PRODUCTIVITY PLANNING METHODOLOGY ELABORATED

Problems, Proposed Method

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 7, Jul 82 pp 88-91

[Article by Candidate of Economic Sciences D. Shtefanich (Ternopol): "Problems of the Planning of Labor Productivity"]

[Text] Among labor indicators labor productivity is one of the central ones. The properly calculated magnitude of its planned increase serves as an important mobilizing means in the use of reserves of manpower resources and as one of the important levers of the increase of production efficiency. The method of planning labor productivity at enterprises and production associations should also conform to these tasks. However, the prevailing procedure of its determination has a number of shortcomings.

The indicators of labor productivity, which are calculated according to the gross or commodity production, depend on the magnitude of both the new value, which is created by living labor at the given enterprise, and the old value, which has been embodied in the consumed material resources. The change of the ratio between them to a considerable extent influences the objectivity of the indicator of the increase of labor productivity.

The use of the standard net output in the calculations to a certain extent eliminates the influence on the magnitude of the indicator in question of not only the differences in the materials-output ratio, but also other factors, which do not depend on the results of the activity of production associations (fluctuations of the proportion of shipments of products under subcontracting arrangements, changes of the structure of production and so on). However, the indicator of labor productivity, which has been calculated in this way, depends on the change of the structure of production, which is due to differences in the rate of decrease of the labor intensity of items. Thus, during 1976-1980 the labor intensity of the production of beet harvesters at the Ternopol'skiy kombaynovyy zavod imeni XXV s"yezda KPSS Production Association decreased by 28.5 percent, while that of the haulm gatherer decreased by 5.4 percent; the ON-400 sprayer at the L'vovsol'mash Production Association--by 42.1 percent, while the OVS-A sprayer--by 4 percent. Since the expenditures on wages, which reflect not the actual labor intensity, but the labor intensity established on a specific date, are incorporated in the standard of the net output, the influence of structural changes on the level of labor productivity is inevitable.

The measures on increasing the technical and organizational level in the auxiliary and service shops, by means of which it is possible to achieve a saving of labor expenditures, having ensured at the same time the appropriate quality of the service of basic production, are taken inadequately into account when calculating the indicator of labor productivity. The traditional approach to the question of the relative decrease of the number of auxiliary workers in connection with the increase of the production volume is too one-sided. A more thorough analysis attests that in a number of instances it is expedient to increase their number. Such a situation can be explained by the improvement of the division of labor, in case of which for the purpose of the better utilization of the technical potentials of the equipment some functions of the service of production, which are performed by basic workers, are turned over to auxiliary workers. As a result of this the relative number of the former decreases, while that of the latter increases.

The classification of the factors, which are used in the calculations of the increase of labor productivity, from the point of view of their composition and the legitimacy of the stimulation of the increase of the latter raises doubt. It is believed that four groups of factors have an influence on labor productivity, among them is the change of the structure of production. In a number of instances as a result of products list and assortmental changes in production up to 60-85 percent of the increase of labor productivity, which is not connected with its real, actual increase, is ensured at enterprises.¹ As a result the enterprises which have achieved an increase of labor productivity by means of a change of the structure of the output, as compared with those which provided it by decreasing the expenditures of labor on the production of a unit of output, other things being equal find themselves in a better economic position. At these enterprises the economic stimulation funds have a large size and larger bonuses are paid to the workers. Such a principle of economic stimulation does not meet the requirements of the increase of the efficiency of industrial production.

Moreover, the inclusion among the factors, which influence labor productivity, of structural changes, and particularly shipments of products under subcontracting arrangements, is at variance with the essence of this indicator. The workers of the enterprise did not invest living labor in the output delivered from the outside by way of cooperation. Consequently, in this case it is illegitimate to speak of a change of the effectiveness of the expenditure of living labor, that is, its productivity. This equally concerns assortmental changes, as a result of which expenditures of living labor, which are equal in time and intensity, create output of a different value as a result of different materials-output and power-output ratios or other similar factors.

The negative influence of products list and assortmental changes is not eliminated by their exclusion from the technical and economic factors, as is envisaged by the method of determining the labor productivity on the basis of the standard net output. The specific labor intensity per ruble of standard net output will be different for different types of items. This is due, as was noted above, to differences in the number and quality of the organizational and technical measures being introduced on the decrease of the expenditures of time on individual items.

1. V. V. Rozhkova, "Metody planirovaniya proizvoditel'nosti truda v promyshlennosti i puti ikh sovershenstvovaniya" [Methods of Planning Labor Productivity in Industry and Means of Their Improvement], Moscow, Gosplan SSSR, 1975, p 5.

The relative release of basic workers in connection with the increase of the production volumes within the limits of the technical potentials of the equipment is not taken into account in the existing classification of the factors which influence the increase of labor productivity. This factor is characteristic of enterprises with a mass type of production, at which the yield of output is determined by the technical parameters of the machines and devices, while the functions of the basic workers reduce to the monitoring of their operation. For example, it is possible to increase by approximately 10 percent the production of crushed stone in the crushing and sorting shops of mechanized quarries just by using the reserves of operating time of the equipment with a constant number of basic workers (crusher operators, screen operators, feeder operators, smoothers [plintovshchiki] and others). This also pertains to some categories of basic workers of the molding, drying and burning processes of brick plants (mixers; workers employed in the preparation of clay slip; stokers of the auxiliary heater; kiln operators and so on). According to our calculations, the indicated factor provided in 1980 for the Zborov, Oryshkovskiy and Terebovlya Plant Administrations of the Ternopol Oblast Construction Materials Association a relative decrease of the number of basic workers by 17 people and an increase of labor productivity by 0.5 percent.

As a result of the enumerated shortcomings the increase of labor productivity, which is determined according to the prevailing method, is relative and in a number of instances understated and does not characterize the real potentials of the individual units in the area of the efficient use of manpower resources. The low level of the soundness of the indicators of labor productivity dictates the need for the making of adjustments in them by superior management organs. As a rule, its growth rate according to approved plans is higher than the rate proposed by the enterprises. Thus, an assignment on the increase of labor productivity in the amount of 126.5 percent was approved for the L'vovsel'mash Production Association for the 10th Five-Year Plan, while in the draft proposed by the enterprise it was 121.7 percent.

The improvement of the planning of labor productivity in the primary units of industry should be based on the elimination of the noted shortcomings by the use of a fundamentally new method. It should induce production associations to assume high practicable assignments on the increase of labor productivity; should eliminate the negative influence on the indicator of its relative increase and of the structural changes in production; should enhance the role and importance of the technical norm setting of labor of all categories of workers, including engineering and technical personnel and employees.

The essence of the proposed method of planning the increase of labor productivity reduces to the following:

the planned range and assortment of items, which are the final product of the enterprise, are determined;

the norms of the expenditures of time on the production of a unit of the final product: the base norms (at the beginning of the 5-year period or year being planned) and the average norms, which will be in effect during the planning period, are established;

the labor intensity of the planned production of the final product is calculated in accordance with the norms of the expenditures of time during the base period and period being planned;

the decrease of the labor intensity of the production of output, which is calculated according to the average annual norms of the expenditures of time during the planned year, as compared with the labor intensity, which is calculated according to the norms of the expenditures of time, which are in effect at the beginning of the 5-year period, is determined;

the increase of labor productivity due to the decrease of the labor-output ratio ($P_{T.c}$) is calculated according to the formula:

$$P_{T.c} = \frac{T_c \cdot 100}{100 - T_c},$$

where T_c is the decrease of the labor intensity of the production of output, percent;

the budget of working time per average registered worker during the base and planning period is determined;

the increase (decrease) of labor productivity due to the improvement (worsening) of the use of working time ($P_{B.p}$) is calculated:

$$P_{B.p} = \frac{\Phi_{\Pi} - \Phi_{\delta}}{\Phi_{\delta}} 100,$$

where Φ_{Π} and Φ_{δ} are the planned budget of working time per average registered worker respectively during the planning and base periods;

the overall increase of labor productivity ($P_{\Pi.o}$) is determined according to the formula:

$$P_{\Pi.o} = J_{T.c} J_{B.p} \cdot 100,$$

where $J_{T.c}$ is the index of the increase of labor productivity due to the decrease of the labor-output ratio; $J_{B.p}$ is the index of the increase of labor productivity due to the improvement of the use of working time.

In the proposed calculations of the increase of labor productivity the determination of the value of the average annual norms of time for the production of a unit of output occupies the central place. The latter finds expression both in physical indicators (units, kilograms, tons, meters and so on) and in value indicators (1,000 rubles of standard net output).

The average annual norms of the labor-output ratio are determined on the basis of the corresponding norms at the beginning of the planning period with allowance made for the period of effect of the technical and economic factors which are introduced during the year being planned. Among them are:

the increase of the technical level of production (the mechanization and automation of production processes, the introduction of advanced technology, the change of the design and technical characteristics of items, the improvement of product quality, the use of new types of material resources);

the improvement of the management and organization of production and labor (the increase of the output norms and the service areas; the introduction of the scientific organization of the labor of workers, which does not involve an increase of the technical level of production; the decrease of the losses from planned defective output);

the change of the production volume (the relative change of the number of workers, including basic workers, in connection with the increase of the production volume);

other factors (the improvement of the skills of workers, the intensification of the division of labor and so other).

The reduction of the losses of working time, changes in the intrasectorial structure of production, the proportion of purchased semimanufactures and shipments of products under subcontracting arrangements in the value of the output and other factors, which do not cause a real decrease of the labor intensity of a unit of output (assemblies and parts, which are produced by a production association), are absent in this classification.

The norms of the labor intensity, on the basis of which the indicator of the increase of labor productivity is calculated, are comprehensive. They include the expenditures of time of basic workers (the technological labor intensity), auxiliary workers (the labor intensity of service) and engineering and technical personnel, employees and junior service personnel (the labor intensity of production management). The calculation of the norm of the technological labor intensity is quite simple. The determination of the norm of the labor intensity of the service of production, which along with the technological labor intensity forms the norm of the production labor intensity, presents some difficulty. In a number of instances the use of direct methods of its calculation is complicated by the very nature of the work on the service of production. Therefore the following versions of the norms and standards are being elaborated and used for the norm setting of the latter:

the norms of time (for workers engaged in the repair of technological equipment, the production of tools and technological accessories);

output norms (for workers engaged in the transportation and transfer of freight);

the norms of service (for workers engaged in the service of equipment, particularly adjusters and lubricators);

standards of the number (for workers who are engaged in the repair and on-duty service of equipment and perform work on the receipt, storage and issuing of physical assets and so on).

The number of auxiliary workers and the effective fund of time of their work are calculated on the basis of the indicated norms. The latter is broken down into the individual types of items in proportion to the specific indicator: the

machine-output ratio, the amount of basic time, the weight of items, the specific rates of consumption of power, the length of the production cycle. The norm of the labor intensity of a specific type of service of production (the particular norm) is derived on this basis. The general norm of the labor intensity of the service of production is determined by adding up the particular norms of the labor intensity.

The norm of the labor intensity of production management is calculated in a similar manner.

It is expedient to elaborate the comprehensive norms of the labor intensity both for the production association as a whole and with a breakdown by its internal subdivisions. This will make it possible to use the general method of the planning of labor productivity along the entire vertical axis of the management of the enterprise.

The use of the indicator of the total labor intensity of a unit of output in the planning of labor productivity has a number of advantages:

the level of output, which has been calculated on its basis, is practicable, conforms to the economic content of the indicator of labor productivity and depends exclusively on the effectiveness of the expenditures of living labor, by eliminating the influence of the assortmental changes in production and reflecting the real processes of scientific and technical progress in production associations;

the closer coordination of the indicators of labor productivity and the number of workers is ensured, since their sound calculations are based on the use of identical standards--the norms of the total labor intensity of production;

the opportunity appears for the standard planning of all the basic indicators on labor and wages (labor productivity, the number of workers and the wage fund). The norms of the total labor intensity together with the standards of the expenditures of wages per ruble of output are the two basic indicators which ensure the drawing up of the above-indicated section of the long-range and current plan of the production operations of enterprises;

the prerequisites are created for the changeover to the computer method of drafting the plans on labor and wages. For this it is sufficient to feed into the computer data bank two basic standards: the norms of the total labor intensity of productions and the standard of the expenditures of wages per ruble of output, which would be periodically updated in conformity with the results of the implementation of the planned organizational and technical measures;

the improvement of the procedure of establishing the value of the wage-output ratio (the standard of the expenditures of wages per ruble of output) becomes possible, since its change will, as a rule, be directly dependent on the labor intensity.

It is expedient to approve centrally the indicator of the increase of labor productivity, which has been determined in accordance with the method set forth above. The remaining indicators, including those calculated on the basis of value amounts, should be grouped with the reference and estimated indicators.

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Working Time

Tashkent EKONOMIKA I ZHIZN' in Russian No 6, Jun 82 pp 60-63

[Article by Candidate of Economic Sciences B. Fofanov: "Working Time and Labor Productivity"; passages rendered in all capital letters printed in boldface in source]

[Text] The most vivid specification of the importance of labor productivity for the triumph of socialism over capitalism was given by V. I. Lenin in 1919 in the work "The Great Initiative," in which he wrote: "Labor productivity is, in the final analysis, the most important, primary thing for the triumph of the new social order. Capitalism created a labor productivity which was unprecedented under serfdom. Capitalism can be completely defeated and will be completely defeated by the fact that socialism is creating a new, much higher labor productivity. This is a very difficult and very protracted matter, but **IT HAS BEGUN**, that is what the main thing lies in."

These instructions of Lenin became the guiding instructions for the Communist Party and the Soviet Government in the drive for the building of communism. At all the stages of the development of our country the party and government have attached and are attaching paramount importance to the increase of labor productivity.

The economic content of the process of the increase of labor productivity consists in the increase of the quantity of output which is produced in a unit of time, or in the economy of the working time spent on a unit of output.

The change of the ratio between the expenditures of working time and the quantity of output is directly connected with changes in the very process of labor. In this connection K. Marx wrote in "Capital": "By the increase of the productive force of labor we understand... any change in general in the process of labor, which decreases the working time which is socially necessary for the production of the given commodity, so that a smaller amount of labor acquires the ability to produce a larger amount of use value."

The enormous role of the increase of labor productivity in the accomplishment of the tasks of building communism is determined by the following things.

FIRST, the increase of labor productivity is the main source of the increase of the production of output and the increase of the well-being of the people.

At the 26th CPSU Congress it was noted that physical assets and spiritual values are created and the national wealth of the country is increased by the labor of workers, kolkhoz farmers and the intelligentsia. Society can distribute only what has been produced. Therefore, the greater the results of labor are, the more the might of the socialist homeland is strengthened, the more completely the personal and social needs are met and the higher the standard of living of the Soviet people is.

In 1980 the real income of workers and employees on the average per working person had increased by 14-fold as compared with 1940. The real income of kolkhoz farmers during the same period increased by 6.9-fold.

DURING THE 11TH FIVE-YEAR PLAN THE PRODUCTIVITY OF SOCIAL LABOR SHOULD INCREASE BY 17 PERCENT, WHICH WILL MAKE IT POSSIBLE TO INCREASE THE PER CAPITA REAL INCOME BY 16.5 PERCENT.

SECOND, the increase of the volumes of industrial production can be achieved by means of extensive and intensive factors, that is, as a result of the increase of the number of working people and the increase of labor productivity. However, as the idle manpower resources decrease, the proportion of the first factor in the development of production decreases more and more.

According to the data of the All-Union Census in 1979, 94 percent of the people of able-bodied age worked in social production or were studying with leave from work. In the 1980's the possibilities of attracting additional manpower are becoming more and more limited. For this reason the steady and rapid increase of labor productivity, by means of which the basic increase of the production of industrial output is achieved, is playing a decisive role.

The increase of labor productivity during the 1st Five-Year Plan provided a little more than half of the total increase of the production volume, during the 10th Five-Year Plan--75 percent. DURING THE CURRENT FIVE-YEAR PLAN IT IS PLANNED TO OBTAIN BY MEANS OF THE INCREASE OF LABOR PRODUCTIVITY 90 PERCENT OF THE INCREASE OF THE NATIONAL INCOME AND INDUSTRIAL OUTPUT. Here, whereas the total productivity of national labor will increase by 17 percent, in industry it will increase by 23 percent.

THIRD, the efficiency of the use of material and technical resources to an enormous extent depends on the level of labor productivity.

GIVEN THE PRESENT SCALE OF PRODUCTION THE INCREASE OF LABOR PRODUCTIVITY BY JUST 1 PERCENT PROVIDES IN ADDITION MORE THAN 4 BILLION RUBLES OF NATIONAL INCOME. In 1980 in the national economy the saving of the labor of 2.6 million people was obtained by the increase of this indicator.

The advantages of socialism are making it possible to increase labor productivity more rapidly as compared with the capitalist countries. Thus, the average annual growth rate of labor productivity in industry during 1951-1980 in the USSR came to 5.7 percent, while in the United States it came to only 3.1 percent.

However, the level of labor productivity in our industry for the present is still lower than in the United States. Hence it is obvious that the further acceleration of the increase of labor productivity is a most important task, the accomplishment of which is necessary for successful economic competition with capitalism.

At the 26th CPSU Congress it was noted that "in the area of the increase of production efficiency and the increase of labor productivity it was not possible to accomplish the tasks in the way outlined by the plan. The mechanism of management and planning, the methods of management and the level of labor and executive discipline lagged behind the present requirements. This complicated the changeover of the national economy to the path of intensive development.

Thus, in accordance with the plan of the 10th Five-Year Plan it was planned to increase labor productivity in industry by 30.6 percent, in fact it increased by only 17 percent, while in Uzbekistan it increased even less--by 11 percent.

There Was Produced in Uzbekistan in a Day:

	1970	1980
Electric power (millions of kWh).	50.2	92.7
Mineral fertilizers (in conventional units, thousands of tons).	11.2	17.8
Tractors.	58	66
Cotton pickers (thousands).	21	25
Leather footwear (thousands of pair).	50.4	83
Household refrigerators (thousands)	157	178
Vegetable oils (tons)	804	1126
Canned goods (thousands of conventional cans)	915.4	1981.5

Indeed, in 1981 labor productivity in republic industry as compared with 1980 came to 103.2 percent, while at enterprises of union subordination it came to 104.8 percent. High rates were achieved by the Mubarek Gas Processing Plant--115.5 percent, the Uzbekbytkhimazot Production Association--110 percent, the Almalyk Furniture Factory--108.2 percent. And all the same the level of labor productivity, which has been achieved for the republic as a whole, can in no way satisfy us. Comrade L. I. Brezhnev also spoke of this during his recent visit to Tashkent, having indicated that "in 1981 only 56 percent of the increase of industrial output was obtained due to this factor."

The basic directions of the increase of labor productivity were indicated by the classics of Marxism-Leninism. K. Marx wrote that the productive force of labor "is determined by diverse circumstances, by the way, by the average degree of the skill of the worker, the level of development of science and the degree of its technological application, the social combination of the production process, the amounts and effectiveness of the means of production, natural conditions."

Developing this thesis of K. Marx as applied to the specific historical conditions of the first socialist state in the world, V. I. Lenin in the work "The Immediate Tasks of the Soviet Regime" indicated: "The increase of labor productivity requires, first of all, the provision of the material base of large-scale industry: the development of the production of fuel, iron, machine building, the chemical industry....

"Another condition of the increase of labor productivity is, first, the educational and cultural development of the bulk of the population.... Second, the increase of the discipline of the working people, the ability to work, the profitability, the intensity of labor, its better organization is also a condition of economic development."

It must be noted that in economic literature, textbooks, reference works and pamphlets such concepts as the reserves, factors and means of the increase of labor productivity are not set forth entirely clearly. All this is having the result that at times secondary things are brought to the forefront, while the main thing remains in the background. That is why, in our opinion, a precise classification of the above-indicated concepts is necessary.

For the purpose of determining the specific means of increasing labor productivity, one must identify the available reserves and unused potentials. IT IS POSSIBLE

TO DIVIDE ALL THE RESERVES OF THE INCREASE OF LABOR PRODUCTIVITY INTO THREE LARGE GROUPS:

- A) THE DECREASE OF THE LABOR INTENSITY;
- B) THE USE OF THE AVAILABLE AMOUNT OF WORKING TIME;
- C) THE IMPROVEMENT OF THE STRUCTURE OF THE COMPOSITION OF THE WORKERS.

The implementation of the reserves of the decrease of the labor intensity of production in practice presumes the improvement of the equipment and technology, the improvement of the organization of production and management, the improvement of the design of items.

The reserves of the available amount of working time lie in the decrease of both its direct and concealed losses. The former find expression in absences from work, intrashift and complete shift idle times, late arrivals and early departures from work. The latter are connected with defective output, violations of the work schedule and so forth.

The reserves of the improvement of the structural composition of the workers consist in the establishment of the correct proportions in the labor of the different categories of industrial personnel engaged directly in production. The means of realizing this group of reserves are the partial, overall and complete mechanization of auxiliary and ancillary operations, the rationalization of management labor and the elimination of the units of management and service, which operate in parallel, the increase of the skills of the workers of the sphere of management and the service of the production process.

During the discussion in the Central Committee of the Communist Party of Uzbekistan Comrade L. I. Brezhnev noted that "the increase of labor productivity is an important question.... We must, comrades, both tighten up labor discipline and use the achievements of science and technology better. For in our country so far a little more than half of the scientific developments being turned over to the national economy are being introduced in production.

"These are real reserves. It is our direct duty to place them at the service of the matter."

The search for and use of the reserves of the increase of labor productivity presume a knowledge of the factors which influence the change of the level of the production of output per unit of time.

In the five-year plan and the technical, industrial and financial plans of enterprises the assignments on the increase of labor productivity are established on the basis of technical and economic factors:

1. THE INCREASE OF THE TECHNICAL LEVEL OF PRODUCTION, including: the mechanization and automation of production processes, the introduction of advanced technology, the change of the designs and technical characteristics of items, the increase of product quality, the improvement of the use and the introduction of new, more efficient types of raw materials, materials, fuel and power.

2. THE IMPROVEMENT OF THE MANAGEMENT AND ORGANIZATION OF PRODUCTION AND LABOR, including: the increase of the output norms and the enlargement of the service areas, the reduction of the losses of working time and the losses from defective output.

3. THE CHANGE OF THE VOLUME AND STRUCTURE OF PRODUCTION, including: the relative change of the number in connection with the increase of the production volume, the intrasectorial structure, the proportion of the obtained semimanufactures and the shipments of products under subcontracting arrangements.

4. SECTORIAL AND OTHER FACTORS, including: the change of geological mining conditions, the content of minerals in the ore, the change of the methods of extracting the minerals and of the working period in seasonal sectors.

Along with the reserves and factors of labor productivity it is also necessary to distinguish the means of their increase. They are specified in the Basic Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990. They are:

the increase of the machine-worker ratio;

the introduction of the complete mechanization and automation of production processes;

the decrease of the number of workers engaged in manual labor, especially in auxiliary and ancillary operations;

the achievement of a balance of the available workplaces and the workplaces being newly created with the manpower resources;

the improvement of the norm setting and stimulation of labor;

the introduction of the scientific organization of labor.

In many speeches and statements of Comrade L. I. Brezhnev, including at the celebrations in Tashkent, attention was directed to the close connection of labor productivity with labor discipline. For in modern social production, which is furnished with advanced equipment, the role of discipline is especially great. The very cost of idle times, carelessness and errors is now completely different. A half hour of idle time of a man with a shovel, for example, is one thing and the same amount of idle time of an operator of the powerful excavator or a tower crane is a completely different thing.

When evaluating the activity of labor collectives and tallying the results of socialist competition the indicators of labor discipline should be taken into account along with the basic indicators of the work.

The study, generalization and dissemination of advanced know-how are one of the most important directions of the increase of labor productivity.

In October 1978 the USSR State Committee for Science and Technology and the Presidium of the AUCCTU approved general procedural instructions on this question, which were submitted for approval to USSR Gosplan and the USSR State Committee for

Labor and Social Problems. In this document the concept "advanced know-how" is defined as the methods and techniques of labor of production leaders and innovators, the forms of work of labor collectives and valuable initiatives, which ensure the fulfillment of the plans of economic and social development and the achievement of great labor productivity.

An important place is assigned to the planned introduction of advanced know-how in the set of measures which are aimed at the improvement of the economic mechanism. It is envisaged, beginning with the 11th Five-Year Plan, to establish in the annual plans of the economic and social development of enterprises assignments on the introduction of advanced know-how in the area of technology, the scientific organization of labor, production and management.

The improvement of the norm setting of labor is an important factor of the increase of labor productivity. The following types of labor norms are distinguished: the norms of time, output and service.

THE NORM OF TIME is the time, which is established in minutes or hours and is necessary in the case of the given technical and organizational level of production for the production of a unit of output.

THE OUTPUT NORM is the quantity of output, which should be produced in a unit of time.

THE NORM OF SERVICE is used in instances when it is impossible or inadvisable to use the other norms. It establishes, for example, the necessary number of workers for the service of a unit of equipment or the number of units of equipment, which are serviced by one worker or a group of workers.

Technically sound and experimental statistical norms of time (or output) are distinguished in the practical work of industrial enterprises. In order to establish a technically sound norm of time, it is necessary to study and determine, precisely what expenditures of working time are required for the production of a unit of output.

The time of work, or the standardized working time, is divided into preparation and finishing-up time, operational (basic and auxiliary) time, the time of the service of workplaces, the time of breaks for rest and the personal needs of the worker.

Time studies and time-and-motion studies are used when elaborating the norms.

TIME STUDIES are the study of an operation by the observance and measurement of the expenditures of working time on the performance of individual components of the operation, which are repeated when producing each unit of output.

TIME-AND-MOTION STUDIES are the measurement of all the expenditures of time without exception during the entire workday or some part of it. Technically sound norms are the basis of technical and economic planning, a necessary condition of the identification of the reserves of the further increase of labor productivity, the efficient use of equipment, the scientific organization of labor and production.

In recent years the movement for the revision of the norms of labor has been developed by the workers themselves. The collectives of the leading enterprises of Uzbekistan have also taken up this valuable initiative.

The decree of the party and government "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality," in which it is envisaged by a special paragraph "to pay workers for the stimulation of the initiative on the introduction of scientifically sound norms of labor and their timely revision a lump-sum award by means of the saving obtained as a result of the revision of these norms," is also unquestionably promoting the extensive dissemination of this initiative.

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LABOR

SPECIAL RESOURCE CONSERVATION INCENTIVE SET FOR 1983

Moscow MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE in Russian No 7, Jul 82 pp 24-29

[Article by V. Rakoti, deputy department chief of USSR State Committee for Labor and Social Problems: "Material Incentives for Thrift"]

[Text] Provision has been made in the 11th Five-Year Plan for further reduction of consumption of raw materials and supplies. In the national economy as a whole targets for conservation of many types of physical resources have been set as a rule 1.5-2-fold higher than rates of reduction of consumption attained in the previous 5-year period. Successful meeting of these targets will depend in large part on increasing the efficiency of utilization of materials at every work station. That is why incentives for the economy achieved are becoming very topical. They encourage both more optimal expenditure of resources as compared to the established allowances and also and above all the observance of the allowances, which take into account deposit for reduction of inputs of raw materials, supplies, fuel and power.

1.

In the present 5-year period more favorable organizational conditions are taking shape for tightening the economy regime: there has been an essential expansion of the list of specific resources subject to centrally set targets for reduction of consumption. Whereas in 1975 such targets in, say, machinebuilding were set for eight types of metal, in the last 5-year period they were set on 24. USSR Gosplan and USSR Gosstnab set targets in 1981 for the average reduction of rates of expenditures on 51 and 141 specific physical resources, respectively. By 1984 their number is to increase by another 10-15 percent.

At the same time the number of dispersing agencies--ministries and departments to which assignments are given for reduction of rates of expenditure--is increasing. The number of such dispersing agencies runs to several dozen for certain resources. Ministries and departments belong to differing sectors of the economy. This increases the diversity of the actual conditions of conservation and imposes high requirements on the effectiveness of worker incentives to be thrifty in the use of supplies, raw materials and equipment.

In the 9th Five-Year Plan and first year of the 11th incentives for conservation of all types of resources were paid from the wage funds and material

incentive fund, and incentives for supplemental conservation of certain of the most important resources were paid by means of special bonus systems built up from the economy achieved, and costs were charged to payment of bonuses for production costs.

Experience has shown that the wage and economic incentive fund were used to a limited extent as sources of incentives for conservation of resources. The reason is that they did not contain the necessary funds which might have been assigned to the awarding of bonuses for conservation of resources, since the mechanism for formation of these funds did not sufficiently take into account the economy achieved.

Only in certain branches of industry (light, food, chemical and certain others) are sizable bonuses paid to workers out of the wage fund. This makes it possible to pay incentives to the thrifty. For example, in 1981 workers of the calendar shop of the Moscow Tire Plant were paid bonuses for conservation from the wage fund amounting to 21-82 rubles per month per worker.

Incentives are awarded in the form of special bonuses in all branches for conservation of 21 types of physical resources (this does not take into account the awarding of bonuses for collection and delivery of production waste for re-use--that is a separate system). But these bonuses were not effective enough, they were paid in small amounts, often they did not exceed 5 rubles per month per man. As a result the incentive system did not achieve its goal.

Here is a typical example. According to figures of the No 4 truck convoy of Moscow No 8 Trucking Combine, in November of last year 43 drivers achieved a fuel saving. The bonus received by 34 of them was less than 1 ruble. It is quite obvious that such bonuses afford little motivation to improve the use of raw materials and supplies.

2.

The document of the CPSU Central Committee and USSR Council of Ministers dated 30 June 1981 provided for an increase in the proportion of the total amount of the saving assigned for payment of bonuses to 75 percent. In this connection a new and improved procedure for the payment of bonuses was adopted in May 1982. Above all the size of incentive funds was increased. For 17 types of physical resources between 25 and 75 percent of the total saving achieved goes for the awarding of bonuses; in other words, for many types of resources the bonus funds have increased 1.5-2-fold. At the same time proportions of bonus amounts exceeding 75 percent of the saving already in effect have been retained in the printing industry (for the saving of paper, paperboard and book-binding materials), the fuel and power industry (for fuel conservation), and in agriculture, water management and the sel'khoztekhnika system (for fuel saving). USSR Gosplan, USSR Gossnab, USSR Minfin [Ministry of Finance] and USSR Goskomtrud [State Committee for Labor and Social Problems] have been ordered to set the proportion of the saving on other types of physical resources which is to go for the payment of bonuses on the basis of proposals submitted by ministries along with the necessary calculations and substantiations.

The awarding of bonuses for conservation of physical resources is organized so as to take into account the peculiarities of work incentives of particular worker categories. Workers and engineering and technical personnel are paid bonuses for conservation of specific types of raw materials, supplies, fuel and power and other physical resources. Bonuses are paid from a part of the saving achieved, and expenditures for the payment of bonuses are charged to the production costs of the product (or work item). The funds credited for the awarding of bonuses are included in the material incentive fund. In enterprises and organizations where there is no such fund, these funds are posted to a special account. Funds for awarding of bonuses for conservation are earmarked and may not be used for incentives awarded for fulfillment of other indicators. Bonuses are awarded for conservation against the duly established allowances and provided the expenditure of the resources has been recorded by means of monitoring and measuring instruments or other technically sound methods.

At the present time the work of setting standards on consumption of specific types of physical resources and the accuracy of recording this consumption are not the same at different enterprises and organizations, nor even from one shop, section or work station to another. That is why business managers have an important role to play in organizing the bonus system. In agreement with the respective trade union authorities, ministries and departments have been ordered to set forth the list of specific types of physical resources for whose conservation bonuses are to be paid so as to take into account the status and accuracy of determining the consumption of physical resources at different enterprises and organizations, and they are also to set forth the list of enterprises and organizations at which this kind of bonus system may be introduced.

The proportions of total savings to be committed to the payment of bonuses indicated above were set as maximum proportions. Jointly with the respective trade union authorities ministries and departments may differentiate these totals (without exceeding the maximum amounts) from one enterprise or organization to another, and managers of the latter may differentiate them from production unit, shift, section, shop or other structural subdivision to another as the function of the level of the work of setting allowances on consumption of physical resources and accuracy in recording that consumption.

Rather rigid consumption allowances can be established for certain specific types of resources, so that it is difficult to achieve a large saving and, consequently, a sizable bonus by improving on them. For that reason ministries and departments, jointly with the respective trade union authorities, have been ordered to designate the specific types of physical resources for which the manager of the enterprise or organization, jointly with the trade union committee, can award bonuses to workers, foremen, technologists, designers and other engineering and technical personnel for attainment of progressive and technically sound rates of consumption. Bonuses are awarded from the material incentive fund, and at enterprises and organizations where such a fund is not formed--from the fund of the enterprise or organization or from other sources of bonuses with the exception of sources which are earmarked.

Accountability for overexpenditure of physical resources is being made stricter. Previously a procedure was in effect whereby adherence to standard rates of consumption of raw materials, supplies, tools, fuel and energy, adherence to limits on the release of gas, and fulfillment of assignments for conservation of ferrous metals and fuel and power resources were established as basic or supplemental conditions for awarding of bonuses based on the principal results of economic activity. This procedure extended to a restricted group of business managers, above all enterprise directors. As a rule it did not concern workers and engineering and technical personnel who are directly involved in expenditure of resources.

Now the saving achieved in the reporting period (month, quarter) is reduced by the amount of overexpenditure of the same type of physical resource that occurred in the previous period of the calendar year, but not by more than 50 percent; that is, approximately the same accountability is established as for overexpenditure of the wage fund.

The system in place has been retained for making up an overexpenditure of fuel in motor transport, in agriculture, in water management and at enterprises of the system of USSR Goskomsel'khoztekhnika [State Committee for Supply of Production Equipment for Agriculture]. When fuel is overexpended through the fault of drivers, 60 percent of the value of the overexpended carburetor fuel and 35 percent of the diesel fuel is withheld from their wages, but not more than one-third of the monthly wage rate (salary).

In agriculture a portion of the value of overexpended fuel and lubricants is withheld from the wages of a strictly defined group of workers--tractor and machine operator, work team leader, assistant work team leader and fuel service attendant (from 5 to 50 percent depending on their role in production). In addition, between 10 and 50 percent of the value of fuel and lubricants consumed on work which does not meet quality standards and in which the established agrotechnical requirements were not met is withheld from the wage of the tractor and machine operator and work team leader.

Bonuses are paid to workers for conservation of specific types of physical resources and for remaining within standard rates of their consumption over and above the maximum size of bonuses established for the sectors, and to engineering and technical personnel over and above the maximum size of the bonus for the basic results of economic activity. Moreover, the sum total of bonuses for conservation and for attainment of standard rates of consumption may not exceed 75 percent of the individual worker's monthly wage rate (salary) for the quarter.

Not everyone, of course, can through his own direct labor ensure conservation or optimum consumption of specific types of physical resources. That is why the list of worker occupations and positions of engineering and technical personnel entitled to incentives for conservation of physical resources or for meeting standard rates of their consumption, the size of the bonus and the procedure for payment of bonuses are set forth by the manager of the enterprise or organization in agreement with the trade union committee.

3.

The procedure adopted in May 1982 for awarding bonuses for conserving and meeting standard rates of consumption of specific types of physical resources does not abolish the practice which has developed in certain sectors of paying bonuses for resource conservation from the wage fund. This has to do with the fact that the special bonus system allowing expenditures for payment of bonuses to be charged to the production cost is allowed only for a small group of physical resources--mainly for fuel and energy, ferrous metals and building materials. Even should the awarding of specific bonuses be subsequently broadened, there will still probably be many resources left to which this procedure does not apply. Consequently, the existing sources of incentives need to be used effectively.

The decree of the CPSU Central Committee and USSR Council of Ministers on tightening the economy regime provides that supervisory personnel of enterprises, superintendents of subdivisions and employees are to be paid bonuses beginning in 1983 for achievement of the assigned limit on material costs per ruble of output (work items) in which a saving against the level of the previous year has already been taken into account, and also for reduction of costs against that limit. The use of a different bonus qualifying indicator than the one for the workers is dictated by the role of managers in production. It is their task to ensure improvement of overall performance, and consequently a reduction of expenditure of all physical resources, not individual types. The indicator adopted for them characterizes the overall result--the limit on all material costs per ruble of output (work items). The material incentive fund is the source of the bonuses; additional transfers are made to it for reduction of material costs against the limit. For achievement of the cost limit the bonuses are paid from the incentive resources that are in the fund.

4.

The effectiveness of the bonus system depends in large part on those conditions which are created for its application. After all, if the consumption of materials is not governed by standards, then there will be no saving and consequently no bonuses. If standard rates of consumption are set incorrectly, then the size of the bonus will be larger than it should be or unjustifiably small. That is why ministries and departments face a very important task of creating the conditions necessary for the fullest possible introduction of the new procedure for awarding bonuses.

The effectiveness of incentives for thrift depends directly on the system in effect for setting standard rates of consumption of physical resources. A majority of the standard rates of consumption are set by associations and enterprises. These standards are periodically revised so as to take into account assignments for their reduction set by the superior organization. A negligible portion of the standard rates for a number of the most important types of physical resources are set directly by USSR Gosplan. Jointly with USSR Gossnab it monitors the standard rates of consumption in effect in the sectors. In 1980 45,400 standard rates of consumption for 9 types of resources, including about 10,000 for rolled products of ferrous metal, were submitted to USSR Gosplan for expert evaluation.

Nevertheless, the standard rates in effect still do not have adequate technical soundness. As a rule they are set from the level achieved. This levels out the frontrankers and the stragglers with respect to the size of the incentive. The allowances are not always progressive. For instance, the 1981 standard rate for consumption of thermal energy in the production of chemical fibers and filaments exceeded by 0.3 percent the 1981 standard rate, although actual consumption was even then 4.5 percent below the allowance. The report for 1981 showed a saving of 6.6 percent against the higher standard. There are quite a few such cases. In 1981 23.3 percent, more than one-fifth, of the standard allowances checked by USSR Gosplan were lowered because they were unsound. The level of the standard rates of consumption turned out to be particularly unsatisfactory for refractories, nonferrous metals, paper, building materials, chemicals and industrial rubber materials.

5.

Checks run by USSR Gosplan at many plants making reinforced-concrete products of USSR Minsel'stroy [Ministry of Rural Construction] revealed unjustified hiking up of allowances for technical losses of cement, mixed concrete and scrap of rolled products of ferrous metals. The situation was much the same in the setting of allowances on construction of ferrous metals at enterprises of Minenergomash [Ministry of Power Machinebuilding].

The procedure in effect for setting standard rates of consumption of fuel and energy is not always adhered to. For instance, at 12 enterprises of USSR Mintshtroy [Ministry of Construction of Heavy Industry Enterprises] which were surveyed instead of linear standard rates of consumption of liquid fuel for motor vehicles set by USSR Gosplan, higher outdated standards were in effect, and not uncommonly fuel was written off on the basis of actual consumption. There were breaches of plan discipline. At 31 of 57 enterprises in the building materials industry checked by USSR Gosplan last year the assignments established for reduction of the rate of consumption of materials were not fully taken into account in the standards. At 10 of 25 enterprises for the production of manufactured fertilizers which were surveyed these assignments had not been passed on down at all.

Ministries and enterprises have to put order in the setting of standard rates of consumption of resources. This is an important preliminary condition for making incentives for conservation more effective. Broader advantage should be taken of the right to differentiate the size of bonuses depending on the quality of the standards which are set.

Ministries face the task of linking two forms of standard allowances on fuel consumption in the case of enterprises which have a motor pool: according to the linear allowances of USSR Gosplan and according to the average reduction of standard rates of consumption set by the superior organization. This is where the defects in reduction of rates of fuel consumption "from what has been achieved previously" are showing up especially. The reason is that enterprises are given assignments for the average reduction of standard rates of consumption relative to the volume of traffic computed in ton-kilometers, while the linear norms are based on fuel consumption per kilometer of the

truck's travel. These standard rates have to be linked more closely to one another.

6.

One large problem is organizing optimum consumption of physical resources at every work station. This is not just an economic problem, but also an ethical one. Solving it depends to a certain degree on changing the mental attitudes of every one involved in using resources and in organizing their consumption. So far there has been little evidence of this change of attitude. Here are the facts. At 66 of the 70 enterprises of USSR Mintyazhstroy checked by USSR Gosstab the keeping of records on consumption of petroleum products, especially primary records, involves breaches of rules and instructions in effect, and fuel is being written off unlawfully. Pieces of distortion of reported data on timber consumption were discovered in Glavzapaduralstroy [Main Administration for Construction in the Western Urals] of USSR Minstroy [Ministry of Construction]. In Glavarkhangel'skstroy [Main Administration for Construction in Arkhangelsk Oblast], Glavtyumenpromstroy [Main Administration for Industrial Construction in Tyumen Oblast], and Glavvostoksibstroy [Main Administration for Construction in East Siberia] records are not kept on the arrival and use of hardwood lumber. It is indispensable in this connection to increase personal accountability for keeping records on consumption of physical resources.

People often complain about "objective" difficulties and about the impossibility of organizing accurate keeping of records on consumption of materials and supplies because of the long list of products produced, say, at enterprises with single-unit or small-series production. It is beyond question that difficulties do exist here. For instance, at the Moscow Automatic Production Line Plant standards are set and records are kept from building to building for consumption of electric power, for the plant as a whole in the case of thermal energy and water, by types of operation for natural gas, and by products as a whole and by shops for ferrous metals. It is, of course, no easy matter to set up the keeping of records on consumption of resources for every work station. One thing is clear, that the keeping of records on the overall volume does not make it possible to accurately determine what is being lost where, how much is being lost, and what reserves there are.

7.

The present level and scale of economic development make it a necessity to seek out additional possibilities for improvement of the setting of standards and the keeping of records on resource consumption. Only on that basis is it possible to enhance worker motivation to use the resources that exist thriftily and optimally. There is an obvious need here to invigorate the efforts of workers in all categories and management units to disseminate everywhere the know-how of the progressive collectives.

At enterprises in Rostov Oblast a valuable movement has come into being under the slogan "From Conservation of Metal and Energy Resources to Above-Plan Output." Its economic significance lies in the fact that the ultimate goal of

more optimum utilization of physical resources--output of an additional volume of products from the same amount of raw materials and supplies--is expressed in it in concentrated form. The initiators of the campaign--workers in the work team of G. K. Drennov and other work teams of the first pipe-welding shop of the Taganrog Metallurgical Plant last year manufactured 1,500 tons of pipe with metal and electric power which had been saved.

Introduction of progressive forms of the organization of work helps to improve the setting of standards and accuracy of records on consumption of physical resources. Take, for example, a form like working on the basis of the work-team contract. It has many advantages. To be specific, it becomes possible to remunerate the work of all members of the work team according to the overall result on the basis of the single job order. Experience shows that records can be successfully kept not only for labor expenditures but also material costs of the work team as a whole. For instance, in the Moscow No 6 Administration of the Third Housing Construction Combine of Glavmosstroy [Main Administration for Construction in Moscow Oblast] all 37 work teams are working according to the method of the work-team contract. This makes it possible to consolidate the keeping of records on consumption of materials, to keep them not only for the number of workers, but also for the volume of work items--for the project as a whole, and in terms of time to cover a period of several months. This experience in work-team cost accounting (khozaschet) can also be applied in other sectors of the economy.

8.

In connection with the new bonus procedure it is indispensable to apply improved forms of statistical reporting on consumption of physical resources, the economy achieved and the bonuses paid for that purpose. The total amounts of bonuses are known only for conservation of fuel and energy--approximately about 90 million rubles per year. But today the special bonuses are being paid for a large number of types of physical resources, and there are no data on the amounts of bonuses paid out. The result is that the work of enhancing the effectiveness of incentives for resource conservation will be done as it were "in the dark": without knowing where bonuses have been paid and in what amount, for conservation of what resources, and whether they are higher or lower than the previous year. The appropriate reporting has to be worked out so that these questions can be answered.

It is equally important to know the level that has been achieved in conservation of physical resources. Statistical records are kept on conservation, but they do not fully meet present-day requirements. In their present form the records reflect the state of consumption of the most important materials for the enterprise as a whole. That is why we often get this situation: there is a saving in one section, overexpenditure in another, and consumption is within the allowance for the enterprise as a whole. And it sometimes happens that there is no conservation, but bonuses are paid out. It may be even worse yet: in one section they overexpended more than was saved in another, as a result there is an overexpenditure for the enterprise and ... bonuses. The shortcoming lies in the fact that at present records are kept here in physical terms, but for comparison with total amounts of bonuses paid the conservation needs to be expressed in value terms.

9.

Statisticians say that elimination of these defects involves large additional costs and considerable expansion of recordkeeping. Quite possible. But the relevant statistical reporting is a necessity; without it it is difficult to administer a system of incentives for optimum use of physical resources, especially now that an abrupt change of direction is being taken toward all-out conservation. The decision has already been taken to introduce the awarding of bonuses beginning in 1982 to workers and engineering and technical personnel for conservation of specific types of physical resources, and without keeping records on conservation by production units, shifts, sections, shops and other subdivisions in value terms, it is simply not possible to administer the bonus system. That is why enterprises must adopt the necessary keeping of records (after all, it is an expenditure of money that is involved). And this will substantially simplify the task of personnel in statistical agencies, since all that is necessary is for enterprises to merely show the figures they have in the annual report.

10.

Another large problem is astute differentiation of the size of bonuses as the function of the level of quality of setting standard rates of consumption on resources. This differentiation can help to guarantee that incentives go to those who deserve them and to create advantages for those enterprises, shops, sections and individual workers who are achieving high results and who, of course, have been set more rigid standard allowances for consumption. In that way equal pay for equal work will be guaranteed in practice. This will also make it possible to discover more fully the unused potential that still exists for conservation.

The size of the bonus must be differentiated at different levels: by the ministry and all-union industrial associations from enterprise to enterprise in the sector or subsector, and by the enterprise from one shop or section to another. This, it must be admitted, is a complicated task for practitioners. The leveling approach is in fact encountered quite often in practice. This problem has already been confronted in the electric power industry, where back in the 10th Five-Year Plan fuel conservation was raised to the rank of a basic indicator for the awarding of bonuses. Personnel of power stations where fuel consumption per unit of power generated has been steadily reduced over a number of years and where now opportunities for conservation have been practically exhausted have been left without incentives. At the same time at other power stations where, as they say, "they are slowly getting faster," they are continuing to receive bonuses. It is no accident that USSR Minenergo has been advancing proposals for redistribution of incentive funds from one power station to another.

Does this seem reprehensible? After all, in the language of mathematics differentiation of the size of bonuses is equivalent to their redistribution. But in actuality this signifies that permission needs to be granted to award bonuses to the personnel of one enterprise with the resources of another enterprise which have been credited on the basis of the results of its

performance. This kind of bonus system does not correspond to the cost-accounting principles of work incentives.

An important mandatory condition for the awarding of bonuses for conservation that has been achieved is that technical specifications and standards governing the product produced be adhered to. There are cases where "a saving is made" at the expense of quality. That is why bonuses must not be paid unless product standards are met.

It is very important to the payment of incentives to those who deserve them that ministries and departments administer correctly the regulation on procedure and size of direct transfers to economic incentive funds for conservation of physical resources over the period 1983-1985 in industry. It calls for the following principles to be applied in the administration of incentives. Ministries and enterprises are to set limits on material costs (in value terms) per ruble of output (work items) in annual and 5-year plans. If there is a reduction of material costs against the limit that has been set, transfers are made to incentive funds (on the basis of an established scale) out of the saving that has been achieved. Should the limit be exceeded, these funds are reduced, but not by more than 25 percent of their size established in the 5-year plan for the relevant year.

The source of the direct transfers to incentive funds is the above-plan profit of enterprises, and at enterprises with a plan loss or low rate of profitability, it is the actual reduction of losses as compared to the plan. The above-plan profit of the ministry as a whole or individual enterprises, and also the ministry's reserve related to profit or incentive funds can also be used as a source.

11.

One of the central areas in this incentive procedure is taken up by the scale of proportion of the saving (overexpenditure) of material costs by which incentive funds are increased (decreased). The need for this scale's existence is dictated by the differing value of physical resources and the unequal size of the total saving per ruble of wages. If this is neglected, then from the standpoint of increasing earnings it will only be advantageous to conserve expensive resources. That is why the scale sets the share of the saving to be assigned to the awarding of bonuses as a function of the ratio between the size of the wage and the sum total of material costs according to the plan in the base year (1980).

A standard scale has been worked out as an indication of the method. When the ratio of the wage (plus additions) to material costs (according to the 5-year plan for the relevant year of the 5-year period) does not exceed 0.3, the increase (decrease) of incentive funds (in percentages of the absolute amount of the saving or overexpenditure of material costs) is 5 percent, at 0.58 or higher it is 90 percent. If this ratio for the industrial sector as a whole is 0.2, the average increase (decrease) of funds is 32 percent of the total saving (overexpenditure). The numerical values of the scale are differentiated so as to take into account the relative share of components in the sum

total of material costs. The increase (decrease) of incentive funds calculated in this way is distributed between the material incentive fund and the fund for social welfare and cultural programs and housing construction in proportion to their size.

One important circumstance should be noted. The sum total of direct transfers to incentive funds determined according to the established procedure is reduced by the amount of funds assigned to the awarding of bonuses to workers and engineering and technical personnel for conservation of specific types of physical resources. If the size of those funds is equal to or greater than the sum total of direct transfers, the transfers are not made.

This procedure instills greater motivation in supervisory personnel of enterprises and superintendents of subdivisions to organize the bonus system effectively for workers and engineering and technical personnel for conservation of specific types of physical resources. Otherwise there will be no additional transfers to the material incentive fund, or they will turn out to be small. In that case supervisory personnel of enterprises and subdivision superintendents will be left without a source of bonuses for the reduction of material costs achieved against the limit that has been set.

Correct and sound incentives are an effective instrument for conservation. Skillful use has to be made of this instrument.

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LABOR

MEASURES SUGGESTED FOR RAISING PRODUCTIVITY, MORALE OF MACHINE OPERATORS

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 8, Aug 82 pp 54-59

[Article by N. Miroshnichenko, candidate of economic sciences (Artemovsk):
"Reserves for Boosting of Labor Productivity of Rural Machine Operators"]

[Text] The CPSU, the socialist state and Soviet trade unions have always shown and continue to show daily concern in regard to labor discipline; they have devoted and continue to devote attention to inculcation in workers of a communist attitude toward labor. A striking confirmation of this is the decree of the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU "On Further Strengthening Labor Discipline and Reducing Cadre Turnover in the National Economy." This decree directs one to the use of that reserve for the increase of social wealth, which, as expressed by L.I. Brezhnev, "does not require capital investment, but can provide a big and quick yield."¹

The seasonal character of agricultural production makes the highest demands on the state of labor discipline and on the timeliness of conducting field work. As in no other sector, the end results of agricultural production depend on productivity of use of worktime and qualitative fulfillment of all technological operations, beginning with field preparation and ending with taking in of the harvest. This in turn makes necessary a continuous search for active forms of influencing the state of labor discipline and creating conditions for coordinated work in different spheres, sectors and subdivisions of production as well as preventing turnover of mechanized cadres.

The diversity of social-economic and soil and climatic conditions in agriculture calls for concrete analysis of the factors that exert a decisive influence on the state of labor discipline and increasing efficiency in the use of worktime and production possibilities. At the same time, one should not lose sight of those factors which are common to many farms and require the attention of competent organs.

Tremendous possibilities for constant improvement of production and labor organization and higher efficiency in the use of the machine-tractor park and manpower resources are shown by data on the structure of losses of worktime by tractor and machine operators at Sovkhoz imeni Artem, presented in the table. At the same time, there has to be pointed out the large size of those losses of

1. Brezhnev, L.I., "Leninskiy kursom" [Leninist Course], Vol 4. Moscow, Politizdat, 1975, p 294.

Table. Structure of Worktime Losses by Tractor and Machine Operators During Spring Sowing at Sovkhoz imeni Artem of Slavyanskiy Trust of Vegetable-Dairy Sovkhozes in Donetsk Oblast in 1980

Causes	In % of total
Lack of work	12.0
Poorly timed preparation of machine-tractor units for work	4.0
Defects of technical and production servicing	19.0
Defects of intrafarm planning	8.0
Violations of production technology	9.0
Poor quality of performed work	5.0
Violations of labor and production discipline	17.0
Cadre turnover	13.0
Deficiencies of cultural-consumer services	8.0
Other	5.0
Total	100.0

worktime which are connected with lack of work for machine operators and organization of production-technical servicing and with the state of labor discipline, cadre turnover and others.

In regard to lack of work for machine operators, one should keep in mind here factors that must be taken into account. Under the conditions of continued growth of technical equipment of agriculture and rapid expansion of the product mix of technical aids, the task of optimization of the operation of the machine and tractor park assumes the foreground as one of the most important factors of its effective use. Practice, however, shows that this problem is being successfully solved at far from all farms. Despite all its apparent simplicity, one constantly runs into a whole series of very complex questions, such as the relative position of caterpillar and wheel tractors, setting up of different mechanized subdivisions on an intra- and interfarm basis, establishment of stable production collectives, retention of young machine operators and so on.

As shown by the analysis, the machine-tractor park far from effectively is being utilized in separate periods of the year. And the reason for this lies not only in the inability to organize its work but also in the specific character of agricultural production. Thus, in the early spring season, there is a great need for caterpillar tractors, and in the summer their use is insignificant but then there is a growing need for wheel-type tractors. Naturally, the lack of load for caterpillar tractors causes heads of subdivisions to utilize tractor operators in other work not requiring a high skill level. This results in a portion of the tractor operators leaving farms. The consequences of such

migration are most undesirable: machine-use indicators deteriorate, the level of stability and discipline of machine-operator collectives drops and the solution of many production problems is made difficult. Nonetheless, a way out of this difficult situation does exist. The idea has already been stated in the press that it would be advantageous for the purpose of better utilization of qualified manpower to assign to individual machine operators not one but two tractors--caterpillar and wheel-type.² With such assignment of tractors to machine operators, questions of using to advantage labor resources and of their better use during separate seasons of the year are resolved more effectively.

The question of use of the machine-tractor park on the side--in road work, at agrochemical associations and in construction and other organizations connected with serving of agriculture--also deserves attention. In the matter of providing tractor and machine operators with work and steady utilization of skilled manpower, opportunities should not be lost that have appeared with the development of interfarm connections. A creative search and economic accounting are required; then the question of efficient use of machine-operator cadres will be solved, and together with it many problems relating to strengthening of labor discipline will also be solved.

A significant influence is exerted on the state of labor discipline by the organization of technical and production servicing of mechanized subdivisions. There should be pointed out the great amount of work done on improving the organization of technical servicing. The material-technical base of this sphere of production has been markedly strengthened; specialized links have been created for technical servicing of the machine-tractor park; they are provided for the most part with trained machine operators; many farms have hard-surface places and roofing for the storage of equipment. Nevertheless difficulties are still presented by insufficient effectiveness of the work of these mechanized links, the inconstant state of their composition at a number of farms and the deficiency of pay in them. As a consequence, downtime occurs for technical reasons as well as violations of labor and production discipline.

A number of questions have not been solved with respect to the planning of technical servicing. Downtime analysis shows that 70-75 percent of their time is spent in waiting for technical assistance. This is due to the fact that the exchange stocks do not always have the necessary spare parts, components and units. And here first of all there must be displayed the positive role of associations of the State Committee for Selkhoztekhnika, inasmuch as they retain in their hands centralized supplying of farms with spare parts and providing technical assistance to the machine-tractor park. Miscalculations in the organization of technical servicing result in not only downtime of machines but also in the loss of the best times for performing of mechanized work, weakening of labor discipline and destabilization of the links of this sphere.

Unsolved problems are also to be found in the sphere of production servicing of field units. One of them is the mechanized loading of sowing machines. For single loading manually of a unit, consisting of three sowing machines, men require 15-20 minutes, women 20-25 minutes and with the mechanized method only 5-10 minutes. The loading work is quite laborious. Not every man is capable

2. See, for example, Zalevskiy, A., "Forming and Holding of Machine-Operator Cadres." *PLANOVOYE KHOZYAYSTVO*, No 12, 1978, pp 52-53.

of lifting a seed bag weighing 60-70 kg, not to speak of women. Today the question of mechanized loading of sowing machines is broader—for purposes of economy of time, it is necessary to load them on the go. Technically this question has been fully resolved. It permits raising the coefficient of use of worktime, easing working conditions and eliminating cases where the selection of sowers is transformed into difficult work. It is important to mechanize such processes as weighing of the bags and a number of other operations connected with the loading and unloading of various materials. The fact is that replacement of manual, unattractive and heavy labor with mechanized is a most effective measure in bolstering of labor discipline.

Some violations of labor discipline occur because of neglect on the part of management and specialists of farms and also nonobservance of plans, time tables for fulfillment of work and requirements as well as of other documents earlier adopted by them. Cases are still frequent where regularity of maintenance is disrupted, and not because of any fault of machine operators but because of instructions of heads of individual subdivisions and farms. Of course, critical situations may occur in the production process where it may be necessary to deviate from previously adopted decisions. Machine operators well understand such situations. But the basis of individual instructions with reference to the operation of the machine-tractor park is not always adequate, which is perceived negatively by the machine operators and is reflected in their discipline.

The strengthening of labor discipline is not helped by excessive surveillance over machine operators by heads of various subdivisions, introduction of various kinds of correctives into the production process without preliminary notification of labor collectives and an uncreative attitude toward introduction into practice of recommendations of agricultural organs and scientific institutions. Present mechanized subdivisions possess a certain production independence. This provides the possibility, on the one hand, of increasing the role of production collectives in the solution of operational problems, constantly being engaged in the search for and use of production reserves, developing a sense of high responsibility for the entrusted task and, on the other, of boosting managerial activity to a higher level and optimizing the combination of administrative, social-economic and psychological-pedagogical methods of management. If the production independence of mechanized subdivisions is underestimated and the opinion of the collective of machine operators is not sufficiently taken into account, it is then difficult to expect precise and coordinated work and a high level of discipline on the part of machine operators. Moreover, there is to be found in this one of the causes of destabilization of machine-operator collectives and disruption of the unity of individual, collective and social interests.

The turnover of machine-operator cadres exerts a significant influence on the state of production discipline. The reasons for this are varied. Among the chief reasons for leaving of machine operators, there should be included dissatisfaction with working and living conditions as well as of pay, production organization and the like. In analyzing the conditions of their work and life, it is necessary to point out the big amount of work done for their improvement by soviet, trade-union, agricultural organs and farms.

A characteristic example in this regard is that of Volnovakhiyskiy Rayon in Donetsk Oblast. The rayon is one of the first in which a long-term plan has been worked out of social-economic development and through the implementation of measures outlined in it, the living conditions of rural workers have been improved over the course of several years. In particular, big successes have been achieved in road construction. Today each farm, each residential center is reliably connected with modern roads to the rayon center. The appearance of the villages has been transformed. The good sound houses of kolkhoz farmers and sovkhoz workers embellish the streets. The network of children's preschool institutions has been expanded. Children's nurseries and kindergartens operate in each village. The level of cultural services for rural inhabitants has been raised. On many farms, clubs, palaces of culture and libraries are not inferior to city ones. In rural consumer-cooperative stores, a wide selection is to be found of food, manufactured, household and other goods. On each farm, areas have been set aside for stationing of mechanized subdivisions. Farm centers contain homes of machine operators, a complex of production structures for the repair and servicing of machines and regulation, testing and storage of equipment. All the machine operators live in well-appointed houses, with material sufficiency. It would be natural for machine operators not to leave such farms for industrial enterprises or for farms in other rayons. The machine-operator collectives in them are stable and consolidated.

All this has a positive effect on the results of production activity. A grain yield of 40 quintals per hectare is no longer a record. Many farms are getting 50 or more quintals of grain per hectare for their crops. The unity of economic and social life provides good results for rural workers. And not only production ones. Machine operators take an active part in social work, conduct a struggle for communist order in production and in everyday life, which means a high labor discipline.

Of no less importance is further improvement of the pay system of rural machine operators. This idea is reflected in the materials of the July (1978) Plenum of the CPSU Central Committee. In his report at this plenum, L.I. Brezhnev emphasized: "Measures of the party aimed at reducing differences in pay of rural and industrial workers are of fundamental importance." It is true that the highly skilled labor of rural machine operators hardly differs from the same labor of personnel of industrial enterprises, but its pay is lower than among industrial workers. The pay of tractor and machine operators in the associations of the State Committee for Selkhoztekhnika, working on the fields of kolkhozes and sovkhozes, is likewise 20-25 percent higher than for the corresponding category of workers in kolkhoz-sovkhoz production. It is natural that the structure of the machine-tractor park of associations of the State Committee for Selkhoztekhnika significantly differs from the park of kolkhozes and sovkhozes, and significant differences also exist in the types of mechanized work performed by them. Nonetheless, taking into account the skill-level, character and working conditions of machine operators, there hardly can be found justification for such significant differences in pay.

Questions of rational combination of pay for intermediate and end results deserve special consideration. No one is going to deny that the end result of production is the chief factor, but it is determined by a chain of intermediate operations and by their qualitative and timely performance. We consider

the procedure sufficiently justified wherein additional pay in the amount of 20 to 50 percent is added for timely and qualitative performance of sowing and harvesting work and for the care of crops requiring tilling between rows and for the procurement of fodder and other responsible operations of machine operators. Machine operators deserve special remuneration who employ industrial technology in the cultivation of agricultural crops (such crops in particular as corn, sunflower and others). Such remuneration should be simultaneous with remuneration for introduction into production of the achievements of scientific-technical progress and advanced practice. The introduction of progressive technological schemes, new forms and methods of labor organization should be accompanied by the introduction of a better system of earnings and the adoption of effective measures for increasing the material incentives of machine operators for the results of their work.

Analysis of the reasons for the disbanding of some mechanized subdivisions operating under the conditions of the wage contract plus bonus pay system with monthly advances confirms the idea of the need of bringing new organizational forms of structuring the production process in conformity with progressive pay systems.

As for the organization of production, the most important factor in the given case, as shown by experience, is an integrated approach to the matter and the use of the best achievements of practice. A high level of work organization, derived from knowledgeable work in dealing with personnel, acts in a disciplined manner in the course of production on the labor collective and on the timely and qualitative performance of the required complex of production operations. This thesis is confirmed in its entirety by experience of working according to the method of Ipatovo machine operators. The Ipatovo method has absorbed the latest achievements of science and advanced practice in the field of production organization, utilization of equipment and production-technical and cultural-consumer services for the machine operators. Stage and functional specialization of labor with this method creates real preconditions for the performance of all field work in designated time periods and with high quality. At the same time, the use becomes possible of flow technology, which would be unthinkable in the absence of a high level of discipline of labor and sense of responsibility for the entrusted task.

Flow technology makes necessary precise coordination in work of individual portions of the production process, observance of spatial and time proportions and the strict performance by each worker of his duties. Thus, in harvesting of grain crops, the link of harvesting units can successfully perform its functions only on the condition of good, coordinated work with the link of means of transport, the latter, in turn, with rapid unloading of motor vehicles, precise determination of places for unloading of combines and so on. In other words, technology of production in itself excludes lack of discipline; it requires of each worker, precise, timely and qualitative performance of production operations. In the given case, the end result depends to a decisive degree on the work of each worker, for which reason his responsibility to the collective grows immeasurably, whether he wants it or not, and the collective evaluates differently the work of each of its workers. In this way, flow technology makes it

possible to create condition for improved production discipline, for provision of unity of collective and individual interests and, finally, to raise production efficiency.

The experience of Ipatovo's workers has provided the possibility of raising the production-consumer and cultural-consumer services for machine operators to a higher level and thereby has positively influenced strengthening of labor discipline and prevention of cadre turnover and creation of stable production collectives. It should be pointed out that on the farms of Donetsk Oblast, which widely use the Ipatovo method, there has been a marked growth of the organized level of production, while labor activity and the discipline of the machine operators have been both raised. We might cite Krasnosel'skiy Kolkhoz as an example. This farm in recent year achieved marked successes in strengthening of labor discipline. Cases of gross violations of it have been practically eradicated. A precise procedure operates at the sovkhos for the adoption of measures for violators of discipline. If a machine operator violates labor discipline resulting in an administrative reprimand, the size of his bonus is reduced 10-20 percent. For coming to work in a drunken condition and theft of socialist property, the machine operator is completely deprived of all forms of bonuses, including his 13th wage.

But the chief method of dealing with violators of labor discipline at the farm is considered to be intensified educational work and wide use of its individual forms. At the same time, the forefront is assumed by measures connected with boosting the role of brigade councils and labor collectives in its realization. Thus the most important questions of production and social life of machine-operator collectives are resolved at brigade councils, results of socialist competition are counted up, bonuses are distributed and potential candidates are discussed for trips to the Exhibition of National Economic Achievements and for acquisition of tourist passes and so forth. In 1980, the five best machine operators of Krasnosel'skiy Sovkhos were given free tourist passes, two for trips to rest homes and one for a trip abroad. The machine operator who gained first place in the socialist competition got a bonus in the amount of 30 rubles, while the 2 machine operators who took second place received each a bonus of 15 rubles. Machine operators achieving particularly significant successes in taking in of the harvest, use of equipment and active participation in social work are awarded the honorary titles "Best Machine Operator of the Farm," "Best Machine Operator of the Rayon" and "Best Machine Operator of the Oblast." The work of the best machine operators gets wide publicity; according to tradition, the celebration in their honor is conducted in an atmosphere of solemnity and festivity. Workers of rayon and patron organizations take part in measures of a similar order. It would be difficult to overestimate the value of such work.

An important direction in the improvement of individual forms of educational work as shown by practice it should be admitted is the development of tutorship. Usually, one tutor is assigned one young machine operator, who as a rule serves as a relief. Naturally, in such cases, the contact of the experienced and young tractor operator is most valuable and effective. It is enough to say that the young machine operator acquires in essence unlimited opportunities for mastering well not only the equipment and methods of its operation

but also organization of work and agrotechnical requirements for its production. Analysis of the work relating to development of tutorship shows that it is a most effective means of strengthening labor discipline and increasing the output of machine-tractor units and involving young people in active participation in the social life of the farms. At the same time, a great many questions exist in this work that are difficult to resolve. Today's graduate of a rural vocational and technical school is a person who has been rather well prepared on the general educational level. His needs are not only big but also many-sided. A tutor does not always succeed in convincing his protegee: inadequacy of knowledge in the field of pedagogy, psychology, social development of labor collectives have their effect. Consequently such measures seem advantageous to us as organization of training of tutors, supplementing their knowledge on different directions of educational work with young people and generalization of already accumulated experience in the development of tutorship. Taking into consideration the promising nature of this form of work with young people, it would appear to be necessary to broadly disseminate the work experience of the best tutors of young people and to constantly encourage their noble work aimed at the forming of a modern agricultural production worker.

In the matter of strengthening of labor discipline, the role of ideological security of machine-operator collectives is remarkable. It is impossible to dwell within the framework of this article on all aspects of this major work. But the most important of them should be disclosed. First of all, it should be noted that considerably more consideration has been given recently to this sector of work. This is explained by the fact that a worker in modern production is becoming an increasingly more communicable individual, and the establishment of his interests is being increasingly determined by his ties with the production collective, use of the achievements of scientific-technical and social-economic progress and improvement of the socialist way of life. In the interest of communist education, it is necessary for a modern worker to be of high ideals, creative, politically literate and a many of many-sided development. And this in turn can be attained given the condition of a high level of ideological work and of its active influence on all sectors of public production.

The influence of machine operators' economic education markedly affects the results of agricultural production and the state of their labor discipline. Characteristically in this connection there appear among questions discussed by machine operators such ones as a solicitous attitude toward equipment, economic use of funds allocated for the maintenance of the machine-tractor park, qualitative performance of work, fulfillment of socialist commitments and much else. Naturally, these questions can be successfully resolved only under the condition of a high level of labor discipline and an increase in personal and collective responsibility for the state of affairs at farms.

An important place in ideological support of mechanized subdivisions is occupied by such measures as organization of socialist competition, visual propaganda, regular meetings of machine operators with personnel of party, soviet, trade-union and komsomol organs and the development of working contacts with patron organizations and other things as well.

Special attention should be given to the question of strengthening of ties between rural vocational-technical schools and their graduates. Analysis shows that cases still exist where fitting housing and living conditions are not created for young machine operators and where they are used not according to their calling; rural vocational-technical schools frequently do not know of this. The consequences of an insensitive attitude toward young people are violations of labor discipline and their leaving the farm. We believe such a measure would be advisable as obligatory work placement of a young machine operator following his completion of the vocational-technical school in his specialty with granting of the necessary benefits by the governing body of the vocational-technical school. Assuming the condition that these matters will be dealt with by the government boards of rural vocational-technical schools, it will be possible to immediately solve many other questions, in particular--organization of tutorship, creation of conditions for raising of qualifications of machine operators, involving them in social life and so on.

The many-million army of rural machine operators represents an advanced detachment of the working class of the agrarian sectors of the country's national economy. Many years of experience have shown that it is capable of solving those tasks that are put to them by the Communist Party at the different stages of development of agriculture. Inspired by the decisions of the 26th CPSU Congress, machine operators will make their worthy contribution to the fulfillment of the targets of the 11th Five-Year Plan.

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LABOR

SHCHEKINO EXPERIENCE IN LATVIA DISCUSSED

Vilnius KOMMUNIST in Russian No 8, Aug 82 pp 40-44

[Article by V. Bashkis and O. Den'kovskaya, employees of the LiSSR State Committee for Labor: "Why Is the Shchekino Method Being Introduced Slowly?"]

[Text] In a speech at the Plenum of the CPSU Central Committee held in May of this year, L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, noted that "simultaneously with the Food Program we will have to discuss and adopt a system of measures aimed at the improvement of the management of the agro-industrial complex and at the improvement of the economic mechanism. . . . The methods of management and planning, the means of incentive and the mechanism of economic operation must create the conditions for highly-productive labor."

During the years of the Ninth and the Tenth Five-Year-Plans the progressive methods and forms of labor organization and incentive were developed in Soviet Lithuania that were first applied in the Shchekino Production Association "Azot" [Nitrogen], in the Gorkiy and Volga Automobile Plants, in enterprises of Rostov and Vladimir Oblasts, in the brigade of N. Zlobin and others. Their experience has enriched industry with effective means of material labor incentive.

Among the followers of the famous collective of the country, the Shchekino chemists, the collective of the Vilnius Azhuolas [not further identified] furniture factory proved to be one of the first in our republic to support this initiative.

During ten years of work in accordance with the Shchekino method the volume of commodity production in the factory doubled and labor productivity increased by a factor of 2.3. Moreover, the number of industrial-production personnel decreased by 85 people or by 11 percent.

The achievement of such high results in the factory was promoted by consistent and purposeful work with respect to the application of progressive experience. First of all, measures were taken with regard to the strengthening of the material interest of the workers in the improvement of the organization of production, in the reduction of the number of personnel employed and, on this basis, in the increase of labor productivity. A permanently functioning commission was created which, based on the initiative and assistance of the work-

ers and pacesetters, carried out a great deal of explanatory work and prepared an integrated plan of organizational and technical measures for the introduction of the Shchekino method.

The collective of the factory, which has a stable wage fund at its disposal, obtains the possibility of spending its savings for the additional payment of labor and the material incentive of the workers. At the present time, almost two thirds of the workers receive additional payments for the combination of professions (posts), the expansion of the zones of service or the increase of the volume of work operations that are being executed. In addition, a system of simultaneous bonus payments is operating for the development and realization of organizational and technical measures that reduce the number of workers and increase labor productivity.

The collective of the factory is devoting a lot of attention to the development of brigade forms of labor organization and incentive. At the present time, 82.5 percent of the workers are working in brigades, and 69 percent of the workers--in brigades where labor and its payment are organized in accordance with a single work order. There has been an increase in labor discipline and the losses of labor time and cadre turnover have been reduced to a minimum.

Significant work in regard to the use of the progressive experience of the Shchekino workers is also being carried out in the system of the Ministry of Procurement LiSSR, where the Shchekino method has been introduced in all 17 enterprises in its charge; a considerable amount of work has been done in the Ministry of the Food Industry, where the sugar and bread-baking subindustries fully worked in accordance with this method in 1981.

Great prospects in the matter of the further dissemination of the Shchekino method and the improvement of labor payment and incentive are opened up in the process of the realization of the measures envisaged in the decree of the CPSU Central Committee and the USSR Council of Ministers "On the Improvement of Planning and the Strengthening of the Influence of the Economic Mechanism on the Increase of the Efficiency of Production and the Quality of Work". The size of the increment to workers for the combination of professions and the execution of the established volume of work with a smaller number of employees has increased to 50 percent. In all industrial enterprises permission has been granted to pay increments to skilled workers employed in especially responsible work for high professional mastery in stages (taking into account the uninterrupted length of service in the enterprise) in the amount of 4.8 and 12 percent of the wage rates and within the limits of the inter-grade difference. The possibility of paying increments for high qualification has been extended to employees. For designers and technologists the dimensions of this increment have been increased to 50 percent of their salary. For the payment of increments for high qualifications up to 1 percent of the wage fund may be expended. The USSR State Committee for Labor and Social Problems, with the consent of the AUCCTU, has been given the right to expand the use of increased piece-rates up to 20 percent in the work [performed] in accordance with progressive and technically substantiated norms. Provided that the plan of production and the growth of labor productivity is fulfilled, the decree permits the transfer of the unused savings of the wage fund to the material incentives fund at the end of the year.

How are the rights granted by the decree of the CPSU Central Committee and the USSR Council of Ministers on the improvement of the economic mechanism utilized in practice?

The LiSSR State Committee for Labor, after having checked in industry on the practice of the use of the rights in the sphere of stimulating the fulfillment of the outlined volume of work with a smaller number of personnel, as well as use of the Shchekino method, established that some ministries, departments, associations and enterprises have carried out certain work for the purpose of securing the fulfillment of the indicated decree: They have held expanded meetings, created commissions, published orders, and outlined concrete organizational measures. To give practical assistance to enterprises and organizations in their jurisdiction in the work regarding the fulfillment of the indicated decree, a number of ministers sent to them the explanations of the USSR State Committee for Labor and Social Problems, as well as the recommendations developed by the union ministries with respect to the combination of professions (posts), the expansion of the zones of service or the increase of the volume of work carried out, and developed their own recommendations in regard to questions having to do with the payment of increments and additional payments. The course of the work regarding the introduction of progressive methods and forms of labor organization and stimulation (the Shchekino method, the brigade form of labor organization with orientation toward final results, etc.), the improvement of norm setting and payment of labor was periodically reviewed at sessions of the collegia and production meetings.

As a result of the work that was carried out, there was an increase in the number of enterprises working in accordance with the Shchekino method. In 1981 the Shchekino method was used by 55 production associations and enterprises in industry (instead of 15 in 1978). The enterprises making use of the Shchekino method in 1981 alone freed, in absolute terms, 709 individuals, or 1.6 percent of the total number of industrial and production personnel, 301 of whom were sent to staff new and vacant job positions.

During the 10th Five-Year-Plan and the year 1981 as a whole, 18,500 people were freed in the industry of the republic by virtue of the combination of professions and the fulfillment of the established volume of work with a smaller number of personnel. As a result, during 1981 alone a savings of 3.8 million rubles was obtained in the wage fund. From the savings that were obtained, 1.6 million rubles were expended for additional payments to workers, engineering and technical personnel and employees for the combination of professions (posts), the expansion of the zones of service, and the execution of the established volume of work with a smaller number of personnel.

Regardless of the work that has been carried out in this direction and the significant economic effect, the reserves for the increase of labor productivity by virtue of the combination of professions and the expansion of the zones of service are still being utilized insufficiently.

In the industry of the republic, no more than 5 percent of those working are combining professions and are working in expanded zones of service, and in some enterprises of the system of the Ministry of the Construction Materials Industry (in the Daugel'skiy Production Association for Construction Materials, the

Akmyantsement [Akmyane Cement] Production Association), the system of the Ministry of the Meat and Dairy Industry (the Kaunas Meat Combine) and other ministries and departments, the number of such workers up to now does not exceed 1-2 percent.

What is the matter? Why do things go differently in enterprises, sometimes even within one and the same industry?

An important reason for this is, first of all, the insufficiently active position of some ministries and departments since the enterprises in their charge do not receive from them the requisite instructions and concrete assistance; secondly, the sluggishness of many directors of associations and enterprises, who are still not ascribing the proper significance to material and moral incentives to labor.

Local audits show that in many enterprises the rights granted in the indicated decree on the improvement of the economic mechanism are not being fully utilized. Unfortunately, this decree has not yet become a handbook for many executives of ministries, departments, associations, enterprises and organizations, as well as of the executives of their structural subdivisions.

In some enterprises plans have been developed, as it were, in fulfillment of the indicated decree, but plans of measures which have remained unrealized, the directors have put them, as they say, "on the shelf". And so it happens that rights are granted, but there is no time to make use of them to advance the cause.

And here is the result. Additional payments for the combination of professions and the fulfillment of the established volume of work with a smaller number of workers in many enterprises are established as before (in the amount of up to 30 percent), and additional payments in the amount of up to 50 percent take place only in the case of the replacement of an absent worker (for reasons of illness, vacation, dismissal, and others). And in some enterprises additional payments to workers whose wages are based on a time rate of up to 50 percent of their wage rate (salary) are not used at all for the replacement of an absent worker.

In some enterprises the training of workers in second and related professions are not reinforced through the actual combination of these professions. Thus, for example, in the Ukmerge Venibe [not further identified] Plant, 237 workers were trained in second and related professions during 1978-1980 and the first six months of 1981, but only 38 individuals are working in combined professions --which comes to only 14 percent of the total number of people trained.

It is a well-known fact that in one and the same grade of skills the possibilities and abilities of the workers are unequal: One can fulfill the work with respect to several professions and related operations, and the other--only in his particular job position. Therefore the indicated decree envisages the right to make additional payments to workers for high professional mastery.

This is the basis for the principle of the consistent promotion of the workers from the lower to the higher levels of professional mastery and qualifications

in accordance with their individual peculiarities and taking into account the possibilities and requirements of production. This makes it possible to raise the role of the wage rate and orient it toward the increase in the efficiency and quality of labor, it guarantees every worker the prospect of the growth of his professional mastery right up to the acquisition of a new specialty and the move to a more skilled type of work. Moreover, this means a considerable addition to his wages.

However, in associations and enterprises this right is almost not utilized. Regardless of the presence of savings in the wage fund, no additional payments to workers are made for professional mastery. In many enterprises there is not even a list of the especially responsible kinds of work and lists of skilled workers to whom these additional payments may be made. The role of the ministries themselves in this is inadequate. Thus, in the majority of the enterprises of the ministries of the furniture and wood processing industry, the construction materials industry and the meat and dairy industry, these additional payments were not carried out at all. The state of affairs is no better in other ministries, departments, and in some enterprises of union subordination.

The payments of these increments and additional payments are held back in many enterprises further by the fact that the growth rates of wages outstrip the growth rates of labor productivity and that the overexpenditure of the wage fund takes place, but this testifies to an uneconomical use of funds for wages. Moreover, the directors of many enterprises, complaining of shortages of manpower, maintain the level of wages for individual categories of workers in the region and town by means of overstating it artificially. There are quite a few cases where auxiliary workers, especially loaders, receive more than 300 rubles in wages per month. Moreover, their number is not determined by any norms and almost half of their working time they are not kept busy. But the possibilities of reducing the number of personnel and the rights granted by the indicated decree of the CPSU Central Committee and the USSR Council of Ministers which stimulate the fulfillment of the established volume of work with a smaller number of personnel are practically not utilized.

Not all enterprises are making full use of the right to additional payments to engineering and technical personnel, and above all masters, as well as employees for high qualifications in the amount of up to 30 percent, and to designers and technologists--in the amount of up to 50 percent of their salary within the limits of 1 percent of the wage fund. Thus, for example, in the system of the Ministry of the Meat and Dairy Industry the Kaunas Dairy Combine and the Klaypeda Meat Combine only 0.3 percent of the fund are being expended for these purposes, the Alitus Meat Combine does not make additional payments to employees, and the Taurage Meat Combine makes few additional payments to masters.

The directors of some enterprises underestimate the role of masters and the foremen of shifts and shops in the organization of work in accordance with the Shchekino method. Even in enterprises that have been transferred to the Shchekino method, as, for example, the Kedayinskiy Chemical Plant, the Panevezhis Sugar Mill, the Ukmerge Venibe [not further identified] Plant and a number of others, these workers do not receive material rewards for the reduction of the number of workers and the increase of labor productivity.

As before, important reasons holding back the dissemination of the Shchekino method in the republic continue to be the absence in some ministries, departments, associations and enterprises of union subordination, of systematic and purposeful work in this sphere, as well as frequent changes in the basic indicators determining the efficiency of the given method, which reduces the interest of the collectives of enterprises in its introduction (production plans, wage fund, labor norms, etc.). Thus, for example, the Ministry of the Food Industry twice changed the plan indicators with respect to the wage fund for the Pavenchayskiy Sugar Plant in 1980--a plant that has been transferred to the Shchekino method of work. The Ministry of the Furniture and Wood Processing Industry limited the opportunity of the Venta Association (also working in accordance with the Shchekino method) to establish additional payments for engineering and technical personnel and employees of more than 0.3 percent of the plan wage fund, whereas the directive decree grants such a right to the enterprises themselves within the limits of 1 percent of the wage fund. Such an approach not only discredits this progressive method in the collectives which have introduced it, but also gives rise to uncertainty about its advantage in other enterprises.

An important prerequisite for the introduction of the Shchekino method in a complex is the dissemination of the combination of professions and the expansion of the zones of service among the workers by every conceivable means. In the draft plan for the introduction of the scientific organization of labor in enterprises and organizations of the union-republic and republic ministries, it is planned to encompass 16,500 people during the 11th Five-Year-Plan, which will make it possible to reduce the demand for industrial and production personnel by 3,300. The Ministry of Light Industry is giving a lot of attention to this question. During the current five-year-plan, approximately 10,000 people in enterprises in its charge will combine professions and serve expanded zones in addition. At the same time, the Ministry of the Construction Materials Industry plans to encompass by these measures only 130 individuals, or 0.7 percent of the total number of the industrial personnel, and the Ministry of Local Industry does not envisage such measures at all.

The realization of the measures envisaged by the decree of the CPSU Central Committee and the USSR Council of Ministers on the improvement of the economic mechanism creates favorable conditions for the further more extensive and efficient use of material and moral labor incentives, the increase of its productivity and pithiness, the increase of the volumes of production output (work operations) with a smaller number of personnel, and the development of the Shchekino method. The only thing that has to be done is to remove the barriers preventing the introduction of the new.

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GREATER AUTHORITY FOR ASSOCIATION MANAGERS PROPOSED

Moscow KHOZYAYSTVO I PRAVO in Russian No 7, Jul 82 pp 57-61

[Article by L. Lipen', candidate of law sciences: "More Authority for Association Managers"]

[Text] Solution of the problems of organizing the administration of an association or enterprise begins with determining their structure and staff. For illustration I will cite the following example. A scientific production association was formed in 1980. At that time an administrative structure was approved for the association and its subordinate enterprise.¹ In view of the fact that the main structural unit and the plant were in the same locality, the functions of the personnel, labor and wages, planning, accounting, transportation services and other departments were centralized at the association. The functions of supply, marketing, procurement, industrial safety, legal services, and of the finance department were centralized at the plant, which means that the corresponding departments are performing these functions also for the entire association. (An interesting, but as yet not investigated, instance of centralization "from below".) In the first stage of the association's existence this structure did not evoke objections from anyone. But as the association developed, this structure ceased to satisfy both the association and its subordinate enterprise. There were objective as well as subjective reasons for this.

One objective reason was the absence of a direct dependence of the pay of the association's employees on the fulfillment of the plant's indicators; and of the pay of the plant's employees on the fulfillment of the association's indicators. (The bonus of each employee is based on the indicators of the enterprise that employs him.) This was reflected in the effectiveness of solving the arising problems, with each department--especially such key departments as planning, labor and wages, supply, procurement, and bookkeeping--giving preference to the solution of its "own" problems.

I will mention also another objective reason: the heavier work load of the department managers who are obliged to perform their functions in the association as well as at the plant, and have to attend production conferences at both places. It is not easy to bear such a physical and mental load.

And now about the subjective reason. Among them I would include particularly the factor of uncertainty regarding the employees' subordination. To whom should the employees report who are on the plant's payroll but whose functions are centralized for both the plant and the association? Who has the right to discipline them, to grant them leave, give them incentives, etc.? The director

general of the association or the plant director? The approved administrative structure does not provide answers to these questions.

Furthermore, it is a known fact that the personal traits of the plant director and of the director general's deputies are important. The legal norm, of course, does not take this fact into consideration. In practice this is felt very keenly. When functions are centralized, the problems confronting the association and the plant are so interwoven that they require constant joint effort by their functional managers. It has not always been possible to achieve this in practice. As a result there is unnecessary nervous tension for the employees and, most important of all, the work of both the association and the plant is uneven. For example, if the procurement department that belongs to the plant's staff performs its functions efficiently during a given period to ensure the plant's operation, there may simultaneously occur shortages of procured parts and subassemblies for the association, the main structural unit.

These and similar instances of inadequate coordination made it necessary to decentralize functions. But since the association's administrative structure had been approved by the minister, it could be changed only with his permission. But permission was denied.

As a way out from the arisen situation and in circumvention of the existing structure, a partial decentralization of functions has been carried out in 1982. From the plant's department a group of employees were formed into a bureau that was then included in the association's staff. A number of departments were reorganized in the same manner also at the association. At the same time the chiefs of the new bureaus were reporting not to the department chiefs, but to the director general of the association or to the plant director, depending on whose payroll they were on.

An analysis of the described situation raised a number of questions, including the following: Does the director of an independent enterprise have the authority to approve the administrative structure and staff of the enterprise he heads? Who decides questions of centralizing production and economic functions at the association? Why did the described situation arise which, with only insignificant variations, is encountered in the work of most enterprises and associations?

According to the legislation now in force, if the structure and staff of a production association and of an enterprise conform to the model structure and staff, they are approved respectively by the director general of the association and the enterprise director. The structure and staff of a scientific production association are drafted by the association, but the director general may approve them only with the ministry's permission.

The model administrative structure of an association and an enterprise is the established model of their organization. It specifies the subdivisions that the director general of the production association and the enterprise director may establish. Departures from this model are permissible only in the direction of omitting some of the subdivisions listed. But no subdivision may be added to the structure of an association and enterprise if such a subdivision is not included in the model structure.

I will again refer to the plant mentioned in the above example. The plant director turned to the main administration and the ministry with a request for permission to appoint an assistant or deputy director in charge of legal matters. Permission was denied, with the explanation that a deputy director in charge of personnel could be appointed when the work force reached a certain size, but a deputy director in charge of legal matters could not be appointed because that post had not been included in the model structure approved for the enterprise.

The question of creating the post of chief legal advisor has been solved in exactly the same manner. Which means that the association and the enterprise do not have the authority to introduce in their structure positions and subdivisions for which there are no provisions in the model structure. The ministry on its part rarely gives permission for departures from the structure it has approved. If it were to permit departures, then it would be meaningless to approve the structure.

The structure and staff of an enterprise subordinate to an association must be approved in the same manner. The statutory provisions do not provide for anything else. However, a practical analysis reveals a number of peculiarities characteristic of approving the structure and staff for a scientific production association and its subordinate enterprises.

If a model structure has been approved for the sector in question, the director general naturally has the authority to prepare and approve for the scientific production association an administrative structure that is in agreement with the model structure (the statutory provisions did not foresee this case, but it is encountered nonetheless in practice). If a model structure has not been approved for the sector, then all questions concerning the approval of the scientific production association's administrative structure are solved by the ministry. In this case an enterprise that is a separate legal entity and is subordinate to a scientific production association does not have any authority to approve its own administrative structure, not even within the limits of the model structure approved for independent enterprises in the given sector, because the enterprise's administrative structure is an integral part of the scientific production association's administrative structure. This is obvious especially when production and economic functions are centralized at the association (as in the example described at the beginning of our article). Thus it turns out that on the one hand the enterprise may approve an administrative structure that conforms to the model structure specified by the ministry; and on the other hand it may not, because the ministry, in the course of approving the administrative structure for a specific scientific production association, has regulated also the centralization of functions at the association, which affects also the enterprise's administrative structure.

It is a known fact that the association has the authority to centralize production and economic functions. Section 5 of the Statute on Scientific Production Associations (Combines) states that "the association that has independent organizations and enterprises under it is their superior organ. In such cases the association may centralize, partially or completely, the performance of individual production and economic functions of the mentioned organizations and enterprises." But is not this in conflict with the system under which the

ministry approves a specific administrative structure for a scientific production association? For here the association's authority to centralize production and economic functions is restricted and changed into an obligation to implement the adopted decision.

In economic practice it often happens that it nevertheless becomes necessary to change the established system. Even the administrative structure of associations changes. But to do so, it is necessary to go through the lengthy procedure of obtaining permission from the main administration and the ministry. How many official trips and how much time are wasted to obtain the necessary permission, and how much flexibility and ingenuity this requires! And what if in a year or two a different decision must be made, and the structure must again be changed in view of the specific situation?

And now about the production associations. The centralization of functions in them is a favorable phenomenon. Suffice it to say that the centralization of accounting, capital construction, and marketing of finished products at the associations has proved suitable everywhere.

Sometimes, however, a generally good idea fails in practical implementation and becomes an obstacle to a rise in the effectiveness of production, instead of aiding it. The point is that the questions of centralizing production and economic functions have been regulated in the approved administrative structures of the production associations. According to these structures, the production units in the same locality as the main production unit, or close to it, cannot have personnel, labor and wages, planning, supply, and bookkeeping departments, legal services, and other departments and services of their own; instead, the association must perform the functions of these departments and services, in a centralized manner. But can you find a single production unit that could dispense with such services? You can, but only if its work force is not more than 500 to 1000 employees.

The model structures issued by three of the Union ministries call for completely centralizing at the associations the functions performed by the mentioned services. But since this is not feasible in practice, the production associations have substituted the centralization of employees for the centralization of functions: the functions are performed at the production unit, within its collective, but with the distinction that all the employees performing these functions are on the payroll of the main production unit and are subordinate to it.² As a result, the production unit's director has no administrative authority whatsoever over the collective he heads, because the "centralized" employees are hired, fired, transferred, rewarded and disciplined by the director general, and not by the director of the production unit.

Such centralization existed in particular at the Minsk Production Association for Computer Technology, from 1974 until 1981. But only after the shortcomings in the administrative structure led to an obvious decline of the economic indicators and the association was beginning to lose its position as one of the progressive associations, was a decision adopted to depart from the model structure. With the minister's special permission, a decentralization is now taking place.

Why does the described situation arise at all? This question is closely linked with the association's model administrative structure. When production

associations are formed, the ministries assume an obligation that the performance of the production and economic functions of the associations' enterprises and organizations will be centralized. This obligation has been carried over into the model structures from which the production associations, whether they want to or not, have no authority to depart.

The conclusion that suggests itself is as follows: the rights granted the enterprise, the production association and the scientific production association regarding the approval of their administrative structure and the centralization of functions practically do not exist and cannot be exercised.

Many managers and employees of the associations and enterprises are fully aware of both the advantages and drawbacks of the administrative structure they must employ and of centralizing functions at the association, but they are unable to correct the drawbacks. The entire problem can be attributed to the fact that the heads of the scientific and other production associations lack the authority to resolve these questions independently and are unable to take into consideration the specific situation that has arisen at the enterprise or association. The existing restrictions on resolving these questions breed a wrong attitude to centralization and destroy what good there is in it. If centralization has failed to produce the desired effect once, for a subject or objective but entirely local reason, the tendency is to refrain entirely from centralization because it would take years to obtain permission to decentralize in case of a second failure.

Practice demands more efficiency and flexibility in the solution of these questions, in the application of model administrative structures. One would think that the director general should have the authority to decide independently, at any stage in the development of production and with due consideration for the specific situation, what functions to centralize at the association and which ones to decentralize, what structure to approve, what positions to establish and which ones to abolish. The guidelines issued by the ministry in this respect, and the model structure in particular, should be only recommendations and should not be mandatory. Only in this case will it be possible to take the specific situation into consideration and to resolve correctly the arising problems, with allowances for both the objective and the subjective factors. No harm will arise if the resolution of the outlined questions is transferred to the discretion of the associations. To the contrary, the centralization of functions at the association will be far more effective and will assume more sensible forms than at present.

An important aspect in the activity of the enterprises and associations is the selection and deployment of their personnel. Pursuant to Section 19 of the Statute on Production Associations (Combines), and Section 18 of the Statute on Scientific Production Associations, the deputy directors general of the association, the chief accountant, the chief of the association's legal department (chief of the legal bureau, senior legal advisor or legal advisor), and the chief of the technical control department are hired and fired by the superior organ, on the recommendation of the association's director general. This question is solved in the same manner at the enterprise level. Actually this list of positions is much broader. It often includes the deputy chief engineers of associations, the directors of the production units, the chiefs of the structural units, and their deputies.

Why has this practice been adopted? Pursuant to Section 21 of the Statute on Production Associations (Combines), the director (chief) of a production unit is hired and fired by the director general (or: director) of the production association. But the directors (chiefs) of the main scientific research, planning and design, and other large production units are hired and fired in the manner specified by the USSR ministries (or central agencies) and the councils of ministers of the Union republics.

If we consider that the mentioned statute does not specify which production units are large ones, then the fact becomes completely understandable that in practice all directors (chiefs) of production units are hired and fired not by the director general but by the superior organ. Moreover, the superior organ appoints also the deputies of the production unit's director (chief). The restriction of the authority of the production association's director general is obvious.

Regrettably, this practice has been adopted at the scientific production associations; for example, at the scientific production associations of the radio industry.

It is likewise unclear who appoints the director of an independent enterprise belonging to a production association or a scientific production association. Pursuant to Section 89 of the Statute on Enterprises, "the director of an enterprise is hired and fired by the superior organ." But what does "superior organ" mean? The immediate superior organ, or any of the superior organs in the chain of command? The immediate superior organ of an enterprise belonging to an association is the association. Can the association's director general hire and fire the director of an independent enterprise? At present he cannot. He in fact lacks the authority to hire and fire the chiefs of the production (or structural) units, not to mention hiring and firing the director of an independent enterprise. Consequently, the director general lacks also authority to reward or discipline them. Therefore the question is warranted: What distinguishes the association as the superior organ from the enterprise? In the statutes there is no clear answer to this question.

As a result of the fact that the officials in the mentioned category are independent of the director general to some extent, another aspect of the selection and deployment of personnel manifests itself: in their mutual relations it is usually the director general whomust show flexibility, and not his deputies. This of course does not make for a healthy situation. To ensure that the director general's deputies work in closer contact with one another and with their superior, it is essential to authorize the director general of a production association or scientific production association to hire and fire all the top officials of the association without exception, and--at least initially--the directors of the independent enterprises, and the chiefs of all the production units and structural units.

The present system of appointment evolved over a longer period of time, and it unquestionably has its good points. But it no longer satisfies the requirements of production and does not ensure efficient and clearly defined management.

It appears that the proposed changes in the system of hiring and firing all employees of the association and of the enterprise by the director general, and

by the enterprise director respectively, should be introduced in a number of associations, within different sectors, only as an experiment for the time being. The results of the experiment should then be evaluated, and on this basis a general solution could then be worked out. To safeguard the rights of employees in the mentioned category, disputes over their dismissal or transfer could be referred to the people's court.

Expanding the authority of the directors general and directors of the production associations, scientific production associations, and enterprises will enhance the rise of production's effectiveness, and the faster and more efficient solution of the problems arising in the work of the associations and enterprises. Naturally, granting the directors general of the associations and the enterprise directors the right to independently determine their structure and staff, to independently form the collectives they head, to decide for themselves what functions to centralize and which ones to decentralize--all this will not undermine the basic principles of our economy, but it will enable the directors general and directors to improve their work.

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LABOR

NATIONAL EMPLOYMENT, WAGE STATISTICS

Moscow VESTNIK STATISTIKI in Russian No 8, Aug 82 pp 77-80

[Excerpts]

IV. Mean Annual Blue- and White-Collar Employment and Wages in the National Economy

1. Mean Annual Blue- and White-Collar Employment in the National Economy and Numbers of Kolkhoz Members Working for the Kolkhoz Collective (millions of persons)

Year	Blue- and White-Collar Workers, Kol- khoz Members*	Of Whom		Kolkhoz Members
		Blue- and White-Collar Workers	Blue-Collar Workers Alone (Including Junior Service Personnel and Security Personnel)	
1940	62.9	33.9	23.9	29.0
1950	67.8	40.4	29.0	27.4
1955	74.6	50.3	37.1	24.3
1960	83.8	62.0	46.2	21.8
1965	95.5	76.9	56.4	18.6
1970	106.8	90.2	64.9	16.6
1975	117.2	102.2	72.3	15.0
1976	118.9	104.2	73.6	14.7
1977	120.6	106.4	75.2	14.2
1978	122.5	108.6	76.5	13.9
1979	124.2	110.6	77.7	13.6
1980	125.6	112.5	78.8	13.1
1981	126.8	114.0	79.6	12.8

*Excluding kolkhoz members who are students or work at state enterprises, establishments and organizations in the capacity of blue- and white-collar employees but participate in kolkhoz work during their off-duty hours. In 1981 their number totaled 350,000.

2. Mean Annual Employment and Mean Monthly Wages of Blue- and White-Collar Workers in the National Economy

Year	Number of Blue- and White-Collar Workers, '000	Mean Monthly Wage, rubles	Mean Monthly Wage Plus Payments and Allowances from Social Consumption Funds, rubles
1940	33,926	33.1	40.6
1950	40,420	64.1	82.4
1955	50,251	71.8	91.8
1960	62,032	80.6	107.7
1965	76,915	96.5	129.2
1970	90,186	122.0	164.5
1975	102,160	145.8	198.9
1976	104,235	151.4	206.7
1977	106,393	155.2	212.2
1978	108,616	159.9	219.1
1979	110,592	163.3	224.6
1980	112,498	168.9	232.7
1981	113,961	172.5	238

3. Mean Monthly Blue- and White-Collar Wages by Branch of National Economy
(rubles)

	1975	1979	1980	1981
Entire national economy	145.8	163.6	168.9	172.5
Industry (industrial-production personnel)	162.2	180.4	185.4	189.6
Of which:				
Blue-collar workers	160.9	180.3	185.5	190.2
Engineers and technicians	199.2	208.9	212.5	214.4
White-collar workers	131.3	142.9	145.8	148.2
Agriculture	126.7	146.0	149.2	152.9
In which: sovkhoses, farm equipment associations and other agricultural production enterprises	126.7	146.0	149.2	152.9
Of which:				
Blue-collar workers	124.7	144.9	148.5	152.9
Agronomists, zootechnicians, veterinarians and engineers and technicians	179.4	186.7	185.5	185.2
White-collar workers	114.0	123.0	122.8	123.1
Transportation	173.5	192.8	199.9	204.3
Rail	158.1	174.4	187.4	191.0
Water	212.8	228.9	232.0	241.7
Motor transport, urban electric and other transit, loading and unloading organizations	177.1	197.3	202.5	206.8
Communications	123.6	142.6	145.8	148.1
Construction	176.8	196.6	202.3	209.4
In which: construction and installation operations	181.1	200.0	204.5	211.4
Of which:				
Blue-collar workers	180.3	202.5	207.9	215.8
Engineers and technicians	207.0	211.3	212.9	216.5
White-collar workers	145.8	147.2	148.0	150.7
Trade, public feeding, material-technical supply and marketing, procurements	108.7	128.8	138.2	140.7
Housing-communal economy, consumer services	109.0	126.7	133.2	135.8
Public health, physical culture, social services	102.3	119.1	126.8	128.5
Public education	126.6	153.3	135.9	136.7
Culture	92.2	104.7	111.3	112.8
Art	103.1	124.1	134.8	136.5
Science and science services	157.5	173.6	179.5	183.2
Credit system and state insurance system	133.8	151.5	162.2	166.8
Employees of government and economic administration agencies; administrative employees of cooperatives and public organizations	131.8	147.8	156.4	158.1

4. Mean Monthly Wages of Industrial Production Personnel by Category and Industrial Subsector
(rubles)

	1960	1965	1970	1975	1980	1981
ALL INDUSTRY /printed in boldface/						
Industrial-production personnel	91.6	104.2	133.3	162.2	185.4	189.6
Of which:						
Blue-collar workers	89.9	101.7	130.6	160.9	184.4	190.2
Engineers and technicians	135.7	148.4	178.0	199.2	212.5	214.4
White-collar workers	73.8	85.8	111.6	131.3	145.8	148.2
Power industry						
Industrial-production personnel	89.1	109.2	138.2	167.3	190.2	194.3
Of which:						
Blue-collar workers	82.0	99.4	124.1	153.7	176.1	180.9
Engineers and technicians	148.7	168.4	202.2	228.5	248.9	250.5
White-collar workers	77.2	98.2	127.1	154.1	176.2	177.2
Fuel industry						
Industrial-production personnel	151.8	174.5	201.0	245.0	271.7	277.5
Of which:						
Blue-collar workers	150.5	171.4	197.2	244.8	270.7	276.5
Engineers and technicians	204.3	237.0	270.0	292.1	319.1	325.4
White-collar workers	93.0	106.7	132.7	164.7	176.4	180.8
Iron and steel industry						
Industrial-production personnel	116.8	127.5	153.4	188.0	214.1	218.0
Of which:						
Blue-collar workers	116.5	125.2	150.9	186.7	215.3	219.1
Engineers and technicians	168.5	190.3	214.5	240.5	246.5	250.5
White-collar workers	81.7	92.5	115.7	138.7	148.3	151.2
Chemical and petrochemical industry						
Industrial-production personnel	96.7	107.6	136.9	165.2	183.2	187.0
Of which:						
Blue-collar workers	93.0	102.6	130.8	160.6	181.3	185.6
Engineers and technicians	147.4	162.8	194.3	215.3	216.6	217.4
White-collar workers	85.1	94.0	123.8	143.0	150.7	152.9
Machine building and metalworking						
Industrial-production personnel	92.8	104.0	134.4	164.1	187.5	191.7
Of which:						
Blue-collar workers	90.4	101.2	131.7	163.5	188.7	193.6
Engineers and technicians	127.9	138.7	168.5	190.6	204.7	206.4
White-collar workers	75.5	84.4	109.8	130.3	146.4	148.8
Forestry,woodworking and pulp and paper industry						
Industrial-production personnel	85.8	99.9	135.3	169.3	191.6	196.9
Of which:						
Blue-collar workers	86.3	100.1	135.1	169.6	192.8	198.4
Engineers and technicians	112.0	126.2	166.0	199.9	208.9	212.5
White-collar workers	71.5	86.8	116.8	142.3	135.4	157.7

Continued

	1960	1965	1970	1975	1980	1981
Building materials industry						
Industrial-production personnel	85.9	101.6	138.2	165.3	180.2	184.7
Of which:						
Blue-collar workers	80.2	91.1	124.9	148.8	169.0	172.8
Engineers and technicians	124.1	135.0	186.3	196.9	193.9	194.4
White-collar workers	75.2	86.6	129.4	142.1	144.0	145.2
Light industry						
Industrial-production personnel	65.6	78.2	103.3	124.6	149.9	152.8
Of which:						
Blue-collar workers	66.1	78.0	103.8	126.0	152.2	155.3
Engineers and technicians	93.0	113.5	140.5	157.2	178.8	180.3
White-collar workers	61.4	76.3	96.6	112.2	131.5	133.0
Food industry						
Industrial-production personnel	73.3	89.8	119.0	146.5	167.2	170.3
Of which:						
Blue-collar workers	69.8	85.0	113.6	142.1	163.6	167.0
Engineers and technicians	122.9	147.5	178.0	200.3	214.0	215.1
White-collar workers	67.7	81.3	107.0	122.9	135.5	137.4

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EDUCATION

KISHINEV CONFERENCE CONSIDERS VOCATIONAL TRAINING UPGRADE

Kishinev SOVETSKAYA MOLDAVIYA in Russian 19 Aug 82 p 2

[Article by an ATEM correspondent: "Train a Worthy Workers' Replacement"]

[Text] A pedagogical conference of the workers of the system of vocational and technical education opened in Kishinev on 18 August. At the plenary meeting Secretary of the Central Committee of the Communist Party of Moldavia P. P. Petrik spoke to its participants.

At all the stages of the development of our state, he said, the Communist Party displayed and is displaying enormous concern about the increase of the ranks and the occupational and cultural level of the working class. It is the main productive force of society, a leading role belongs to it in the building of communism.

Abundant experience in the education and training of skilled workers has been gained by the system of vocational and technical education. By utilizing and improving it, during the 11th Five-Year Plan it is planned to train for the national economy of the republic at vocational and technical schools about 170,000 specialists, including nearly 135,000 with a secondary education.

All the possibilities have been created for this: the network of schools has been expanded, their material and technical base has been strengthened. Today 108 such educational institutions, 47 of which were opened during the past 10 years, are training personnel of 180 occupations. More than 50,000 graduates will acquire here specialties very necessary to agriculture--machine operators, stock breeders, vegetable growers, viticulturists, reclamation workers, who constitute the basis of those employed in kolkhoz-sovkhoz production. Their good training is of great importance in the implementation of the decisions of the May (1982) CPSU Central Committee Plenum.

Further Comrade Petrik dwelt in detail on the most important questions of the improvement of the system of vocational and technical education, the increase of the level of training of boys and girls and the formation at educational institutions of high-principled and educated worker-champions, who strive actively to augment the glorious labor, battle, patriotic and international traditions of the Soviet people.

The improvement of the activity and the development of secondary and technical schools are a matter of great political and state importance. Practice has shown

that only at such educational institutions is it possible to train skilled personnel of broad specialization in new and complicated occupations, who are capable of working under the conditions of the brigade organization of labor, which during the 11th Five-Year Plan will become the basic form. It will broaden considerably the labor functions of workers and will create the conditions for the better development of their abilities, while this is the most correct means of the further intensification of labor, which has been proven in practice.

In complete conformity with the decisions of the 26th party congress and the decree of the CPSU Central Committee "On the Further Improvement of Ideological and Political Educational Work" the engineering and pedagogical collectives under the guidance of the party organizations have increased the attention to the formation among students of a Marxist-Leninist world outlook, Soviet patriotism and proletarian internationalism. The education of future workers on the basis of the example of the life and activity of V. I. Lenin holds a significant place in this work. The extensively developed competition of young people for a worthy greeting of the 60th anniversary of the formation of the USSR and for the right to sign the anniversary report of the Leninist Komsomol to the CPSU Central Committee has become a component of it.

It is important to generalize the positive experience of the best educational institutions and to make it accessible to all the workers of the system of vocational and technical education. This is one of the effective means of eliminating the still existing substantial shortcomings in its activity and an indispensable condition of the further increase of the quality of the education of the young workers' replacement and its preparation for an active life of labor.

The party organizations and pedagogical collectives of vocational and technical schools should achieve the significant improvement of the teaching of social disciplines. For precisely they influence the formation of the personality and develop among the students a class approach to the appraisal of events and phenomena and the aspiration to wage an uncompromising struggle against that which hinders our progress. It is necessary to show young people in a clear and well-argued manner the historical advantages and achievements of real socialism and the policy of the party of strengthening the friendship of the fraternal peoples of the USSR. This furnishes boys and girls with the ability to defend conclusively their stand in the struggle against bourgeois ideology and the attempts to falsify our Soviet way of life.

The party and Komsomol organizations, every instructor and foreman are called upon to help students to study in greater depth the works of the founders of scientific communism, the documents of the party and government, the works and speeches of General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet Comrade L. I. Brezhnev, his fine works "Malaya zemlya" [The Small Land], "Vozrozhdeniye" [Rebirth], "Tselina" [The Virgin Land] and "Vospominaniya" [Memoirs], which educate young people on the basis of the example of older generations.

The content of the educational work with students should become more topical, while the forms should become modern and effective. It is necessary for common political days and sociopolitical lectures to be held regularly at all schools, for an efficient system of the organization of political studies to be in effect. It is very

important for the preparation for the significant anniversary to permeate fundamentally the content of all the activity of vocational and technical schools and to contribute to the increase among young people of a sense of pride in their great homeland--the Union of Soviet Socialist Republics.

A significant portion of the speech of Comrade Petrik was devoted to questions of the labor education of boys and girls, which is one of the effective means of the formation of the young worker. He emphasized that on-the-job training should be organized with the maximum consideration of the latest achievements of scientific and technical progress. In this connection the question of the steady broadening of the political outlook, the increase of the level of knowledge, spiritual culture and skills of the tutors of young people--instructors and foremen, and the persistent improvement by each collective of the educational and training process is becoming urgent.

In analyzing the progress of the fulfillment of the decree of the CPSU Central Committee and the USSR Council of Ministers "On the Further Improvement of the Process of the Training and Education of Students of the System of Vocational and Technical Education," Comrade Petrik pointed out the importance of the broadening and strengthening of the ties of vocational and technical schools with the base enterprises and the increase of the role of labor collectives in the training of the workers' replacement and in its attachment to production. It is impossible to tolerate the still existing cases of the irresponsible attitude of some enterprises and organizations toward the practical production work of students. Frequently tutors are formally assigned to them, the conditions for the acquaintance of boys and girls with modern equipment and technology are not being created everywhere.

The executives of vocational and technical schools and the State Committee for Vocational and Technical Education should do much in the elimination of these and other shortcomings. It should introduce more rapidly the experience of Leningraders on the personal assignment of graduates. This will increase the level of the training of future workers and the responsibility of labor collectives for their proper use.

Comrade Petrik directed attention to the need for the improvement of the vocational guidance of the graduates of schools and their assistance in the fully conscious choice of their place in the sphere of physical production. This should become a common cause of the organs of public and vocational and technical education, schools, educational institutions, base enterprises and the public at large. Now, as never before, the importance of the cooperation of the vocational and technical school and the school is increasing. The foremost role in this process belongs to the engineering and pedagogical collectives of the vocational and technical schools. It consists in the formation of public opinion and the extensive popularization of working class occupations.

The further improvement and development of the system of vocational and technical education will improve the education of a worthy reinforcement of the working class and the provision of the national economy of the republic with skilled young personnel, who together with their older comrades have to solve not by number, but by ability the vital questions of the rapid progress of the economy.

At the conference Chairman of the Moldavian SSR State Committee for Vocational and Technical Education N. N. Shelar' gave the report "The Results of the Work of the System of Vocational and Technical Education During the 1981-1982 School Year and the Tasks on the Implementation of the Decisions of the 26th CPSU Congress and the 15th Congress of the Communist Party of Moldavia and on the Worthy Greeting of the 60th Anniversary of the Formation of the USSR."

The speaker and those who spoke focused attention on the questions of the improvement of the activity of educational institutions and the creation in engineering and pedagogical collectives of an atmosphere of great demandingness and responsibility for the improvement of the training of personnel. The need for the increase of the quality of educational work and the teaching of social and special disciplines, the strengthening of the ties of vocational and technical schools with production and the development of their mutually interested cooperation with base enterprises was pointed out. All this, the speakers stressed, should increase the level of training of skilled workers and should promote the cultivation among boys and girls of the aspiration by their dedicated labor to increase the glory of the great homeland and to make it more beautiful and richer.

Deputy Chairman of the Presidium of the Moldavian SSR Supreme Soviet S. S. Sidorenko is participating in the work of the conference.

The sectional meetings of the conference participants will be held on 19 August.

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EDUCATION

MORE LEGAL TRAINING FOR MANAGERS, SPECIALISTS URGED

Moscow KHOZYAYSTVO I PRAVO in Russian No 7, Jul 82 pp 43-47

[Article by O. Kuptsov, deputy chief for improvement of qualifications of supervisory personnel and specialists in the economy in the Teaching Methods Administration of the USSR Ministry of Higher and Specialized Education [Minvuz SSSR]: "Legal Training of Personnel in the System for Improvement of Qualification"]

[Text] The level of legal training of managers and specialists in the economy needs to be raised substantially in order to further strengthen socialist legality and law and order.

In his speech at the 26th CPSU Congress Comrade L. I. Brezhnev said: "We have adopted quite a few good laws, comrades. The job now is to implement them exactly and unswervingly. After all, a law takes on life only when it is carried out--carried out by everyone and everywhere." But in order to carry out laws, one must know them. Yet experience frequently demonstrates the legal illiteracy of managers in the economy. In an article published in the newspaper PRAVDA entitled "The Director's Legal Support"* V. Krumin', deputy chairman of the LaSSR Council of Ministers, wrote that in 1979 the labor law inspectorate of the republic trade unions council alone issued 310 citations to business managers containing instructions on correcting more than 1,100 breaches of labor legislation.

A radical improvement of the legal education of personnel is indispensable, especially for managers issuing and signing orders and regulations. Decrees in that direction have been adopted by the CPSU Central Committee: "On Further Improvement of the Ideological Effort and Political Indoctrination" and "On Improvement of Work To Protect Law and Order and Step up the Fight Against Violations of the Law." The system for improvement of qualifications of supervisory personnel and specialists in the economy has a large role in this important and crucial task.

In recent years USSR Minvuz, its Teaching Methods Administration for improvement of qualifications of supervisory personnel and specialists of the economy, the minvuz's of the union republics, and their subdivisions for

* PRAVDA, 31 May 1980.

instruction have begun to pay considerably more attention to the legal training of personnel. For instance, the Teaching Methods Administration of USSR Minvuz, jointly with the section of legal disciplines of the Scientific Methods Council for Problems of Improvement of the Qualifications of Supervisory Personnel and Specialists of the Economy have repeatedly conducted checks into the status of legal training of managers and specialists in institutes and faculties for improvement of qualifications. The results obtained, the materials resulting from their analysis, and proposals for improvement of this work were made known to interested ministries and departments and as a rule were favorably evaluated.

USSR Minvuz, in agreement with the USSR Ministry of Justice, issued on 7 June 1976 Letter of Instruction No 16 entitled "On the Study of the Bases of Labor and Economic Legislation in the System for Improvement of the Qualifications of Supervisory Personnel and Specialists of the Economy." The teaching of the course entitled "Bases of Economic Legislation" was made mandatory by that letter for all students of the course entitled "Bases of Labor Legislation," and it was recommended for certain categories; a final check on knowledge of labor legislation was introduced, and a sample was given of the minimum number of class hours and distribution of time by topics. This letter has played a large role in improving the legal training of personnel. Legal courses have been included as independent compulsory disciplines in the recommendation for the makeup of curricula. Standard topic outlines and curricula on the bases of labor and economic legislation were developed and adopted for various categories of managers and specialists.

All-union conference-seminars of teachers of legal disciplines in the system for improvement of qualifications have been held repeatedly; at them the relevant recommendations have been adopted and have been sent on to ministries and departments. In October 1980 the question of legal training of personnel in the system for improvement of qualifications was taken up in a meeting of the Interdepartmental Council. In the process of preparation for that session a survey was made of the status of legal training of managers and specialists in 89 educational subdivisions for improvement of qualifications.

An analysis of the material obtained shows that in all institutes, faculties and courses legal disciplines are being taught. Moreover, in a number of educational institutions, depending on their respective functional duties, the students are studying not only the legal disciplines recommended by USSR Minvuz, but in addition the legislation pertaining to environmental protection, land, water, housing, pensions, administration or other fields. An effort has been made to improve the organization and boost the quality of the teaching of the legal disciplines. In all institutes and faculties for improvement of qualifications syllabi and curricula have been revised to take into account the specific sector involved and to conform to the standard syllabi and curricula adopted by USSR Minvuz.

Constant oversight over the content and quality of the teaching of legal disciplines has been set up in most subdivisions for improvement of qualifications. The teaching process is being improved. Conferences, seminars and consultations on teaching theory and the working out of problems in the form

of games have become widespread. The experience of the FPK [Faculty for Improvement of Qualifications] of the Odessa Marine Engineers Institute in developing a comprehensive business game which organically incorporates not only the production aspect, but also the legal aspect, of solving various practical problems, is of interest. Attention should be paid to the production problems and economic situations worked out by the IPK's [institute for improvement of qualifications] of the USSR Ministry of Light Industry, RSFSR Ministry of Procurements, and the Latvian, Lithuanian and Belorussian union republics. Certain subdivisions for improvement of qualifications are using learning machines and computer equipment (the Donetsk Affiliate of the IPK of the USSR Ministry of Coal Industry, and the IPK's of the RSFSR Ministry of Procurements and USSR Ministry of Light Industry). In the IPK's of the UkSSR Ministry of Food Industry and MSSR Ministry of Education display rooms have been set up for the legal disciplines equipped with stands, visual aids, charts and tables concerning labor and economic legislation. Almost everywhere a final check has been introduced to test the knowledge of students in the form of tests and examinations, and, in a number of educational subdivisions, in the form of graduation papers (either entire papers or the requirement of a legal section in a comprehensive graduation paper). As a rule the graduation papers of students concerning legal matters have a practical orientation. They are discussed in scientific-technical councils of enterprises and associations.

By and large the teaching process is carried on by highly competent professors and teachers. The number of teachers has increased, including fulltime teachers. In 1980 about 1,000 teaching lawyers, 11 percent of whom were doctors of jurisprudence and 32 candidates of jurisprudence, were carrying on the teaching process in the legal disciplines in institutes and faculties for improvement of qualifications. Practicing lawyers with long experience are recruited to teach courses from among chiefs of legal services of ministries, chiefs of legal sectors of scientific research organizations and the legal consultants of enterprises, arbiters and other personnel.

In a number of institutes for improvement of qualifications (USSR Ministry of Light Industry, UkSSR Ministry of Housing and Municipal Services, UkSSR Ministry of Food Industry, UzSSR Council of Ministers, the education ministries of LaSSR and LiSSR) have created departments for the legal disciplines which carry on work related to teaching methods and scientific research. For example, the law department of the LaSSR Intersector Institute for Improvement of Qualifications every year issues methods manuals and research materials. All of this is conducive to permanent assimilation of the material, forms an ability to understand normative documents, inculcates the habits of independent settlement of problems of a legal nature that arise in production activity.

At the same time the results of a check have shown that there are still shortcomings in the work of legal training of personnel in the system for improvement of qualifications of supervisory personnel and specialists of the economy which are diminishing its effectiveness and quality. Not all institutes, faculties and courses for improvement of qualifications have been paying due attention to improvement of the legal knowledge of managers and specialists. An insignificant number of class hours is devoted to the study of labor and economic legislation. In many cases the legal disciplines take up only about 3 percent of all the class time in syllabi.

For instance, in the IPK of the RSFSR Ministry of Procurements shop chiefs hear between 3 and 5 hours of lectures on labor legislation. In the IPK of the USSR State Committee for Television and Radiobroadcasting the time devoted to legal disciplines for all categories of specialists amounts to only 2 hours. In courses for improvement of qualifications in the Kiev Polytechnical Institute only 8 hours would be assigned to the legal disciplines for groups of supervisors in a 2-month course of study (288 hours). In the curricula of the IPK of the USSR Ministry of Fishing Industry the study of the legal disciplines has not been provided for at all for certain categories of students.

In a number of educational subdivisions for improvement of qualifications the legal disciplines have not been identified as independent sections, but are included in other sections of the curriculum or taught jointly with them. For example, in the Institute for Improvement of Qualifications of USSR Gosstnab and its affiliates the legal disciplines were included as one of the topics in the syllabi of specialized economics courses. In courses for improvement of qualifications of supervisory personnel and specialists of the KaSSR Ministry of Communications a single topic "Labor Legislation, Staff Size and Personnel Work" was taught in groups of chiefs and deputy chiefs of rayon communications centers.

Given the constant updating of legislation, this situation cannot be justified. The artificially created lack of class time does not afford the possibility of applying active methods of learning, nor to check that the knowledge has been mastered.

In certain institutes for improvement of qualifications there are no syllabi for the legal disciplines (IPK of the RSFSR Ministry of Procurements, the Gorkiy affiliates of the IPK of the Ministry of Machine Tool and Tool Building Industry and USSR Gosstnab). A number of courses for improvement of qualifications, including those at the republic level, do not have standard syllabi on the bases of labor and economic legislation. The syllabi that exist there as a rule do not meet the requirements which have been assigned. For instance, in the higher courses for improvement of qualifications of supervisory personnel and specialists of the KaSSR Ministry of Motor Highways the syllabi in the legal disciplines were approved in 1972 and have not been revised since.

Little attention is still being paid to introduction of various forms of verifying students' knowledge. In a number of IPK's (Ministry of Motor Vehicle Industry, Ministry of Radio Industry, etc.) there is no final check on the knowledge of the legal disciplines for most of the groups of students. Rarely is the knowledge of students checked on the bases of economic legislation. Only in certain educational subdivisions (in the All-Union Institute for Improvement of Qualifications of the USSR Ministry of Light Industry and its affiliates, the Tashkent Affiliate of the IPK of the USSR Ministry of Trade, the All-Union Institute for Improvement of Qualifications of the USSR Ministry of Water Management, the IPK of the LiSSR Ministry of Higher and Secondary Specialized Education and its Kaunas Affiliate) is knowledge in the legal disciplines checked during the learning process. Graduation papers on legal topics have been introduced as a rule only in specialized groups (workers in personnel and legal staff services and so on).

The few hours devoted to the teaching of the legal disciplines does not make it possible for many institutes and faculties for improvement of qualifications to enlist qualified lawyers as fulltime teachers. At the same time in certain institutes for improvement of qualifications law departments are not being created even though there is a sizable teaching load (the Intersector Institute for Improvement of Qualifications of the BSSR Ministry of Higher and Secondary Specialized Education).

Insufficient use of equipment in teaching is an existing shortcoming. Rarely is use made of slides, filmstrips, tables and visual aids. Due attention is not paid to the work of handling information on legislative material. Little teaching material is published on methods for the students. Only in a few institutes, faculties and courses for improvement of qualifications have libraries been made up of the necessary legal literature (the IPK of the Ministry of Construction of Petroleum and Gas Industry Enterprises, the USSR Ministry of Trade, etc.). As a rule there is legal literature, and what there is is in part outdated. There is no regular system for delivering to subdivisions for improvement of qualifications the legislative acts of the sector, instructive materials of a general and sectoral nature, nor periodicals on legal topics. Subscription to such periodicals as the journals KHOZYAYSTVO I PRAVO, SOTSIALISTICHESKAYA ZAKONNOST', SOVETSKAYA YUSTITSIYA, and so on, has not been organized as it should have been, which is why students often do not have the opportunity to become familiar with them.

Contacts with the law services of ministries and departments are poor in most educational subdivisions in the system for improvement of qualifications. Only certain law services (Ministry of Construction of Petroleum and Gas Industry enterprises, USSR Ministry of Power and Electrification, LSSR ministries, etc.) take part in developing syllabi and curricula on labor and economic legislation. In rare cases is the subject matter and quality of teaching of the legal disciplines checked by legal services. All of this indicates that at the present time the status of legal training of personnel cannot be pronounced healthy.

After a discussion of the status of legal training of personnel in the system for improvement of qualifications the Interdepartmental Council adopted a decree on 14 October 1980 aimed at improving this effort. Specifically, it recommends that ministries and departments analyze the condition of this training in subordinate educational subdivisions for improvement of qualifications and adopt the necessary measures to improve it; establish good contacts between legal services and educational subdivisions, establish checks on the subject matter and quality of teaching of the legal disciplines; furnish lawyer-teachers the normative and instructive materials of a general and sectoral nature, and so on. The necessary recommendations on these matters have also been issued to institutes, faculties and courses for improvement of qualifications.

We should note the constructive role of the decision of the Interdepartmental Council of USSR Minvuz which has been mentioned. In a number of sectors of the economy an analysis has been made of the training of supervisory personnel and specialists in the field of law, and specific measures have been outlined and to some extent carried out to improve this work. In many educational

institutions for improvement of qualifications the number of hours for studying the problems of legal and economic legislation has been increased. There has been improvement of the legal experts who are teaching the courses and improvement of the teaching process and its methods support, and relations have been strengthened with sectoral law divisions and arbitration commissions. For instance, in the USSR Ministry of Construction Materials Industry the legal department and arbitration committee drafted a plan of measures over the 1981-1985 period to ensure socialist legality and improvement of legal work at enterprises and in organizations, which was approved by the first deputy minister. The plan called for supervisory personnel and specialists to study the bases of labor and economic legislation and practice in their application in the All-Union IPK of the USSR Ministry of Construction Materials Industry and for joint seminar-conferences to be held of members of legal and bookkeeping services of production associations, enterprises and organizations to discuss the problems of improving the effort to combat legal infractions. The number of hours devoted to the study of legal disciplines has on the average been increased to 11 percent of the total amount of class time, syllabi and curricula have been reworked in the light of the decisions of the 26th CPSU Congress, 50 situations concerning labor and economic legislation have been worked out and used in the teaching process, and several methods manuals have been issued on legal topics.

The results of an analysis of the legal training of supervisory personnel and specialists indicate that substantial potential exists for improving this work across the board. The principal area is to improve the subject matter that is being taught. At present the specific nature of the sector is often not taken into account, students in courses are given a large amount of general legal information, the topic outline of the subject matter study often does not correspond to the particular positions which the students hold. For instance, in the IPK of the RSFSR Ministry of Agriculture the study of economic legislation for chief veterinary physicians of agriculture production administrations of rayon executive committees specifically covers the delivery contract, the contract with the carrier, performance of decisions of an arbitration commission, settlement of business disputes, and so on. These matters are not directly related to the professional activity of this group of students and do not lie within their competence. In the IPK of LiSSR Minvuz the section for economic legislation taught to senior economists and financial experts includes such topics as the legal status of associations and enterprises, legal matters in product quality control and the setting of standards, the delivery contract, and so on. At the same time it does not cover topics necessary to the work of this group of students: legal matters in setting and applying prices, budget financing, settlement and credit financing, and so on.

Given the limited amount of class time allocated to the study of the legal disciplines, a thorough selection needs to be made of the teaching matter, it should be saturated with specific sectoral material closely related to the particular production activity of supervisory personnel and specialists. The legal services of ministries and departments could render invaluable aid in drafting syllabi and curricula.

Another important direction in improving the legal training of personnel is to intensify the teaching process. There is a need for broader use of active methods and equipment in teaching, for all possible ways of checking knowledge that help to form in the students knowledge, abilities and habits in application of normative acts in their own production activity. Another important thing is the method support of the teaching process, in particular the drafting of collections of decision-making games and legal situations and their dissemination among educational institutions for improvement of qualifications. USSR Minvuz, jointly with the USSR Ministry of Justice, should settle the question of method supervision of the legal training of supervisory personnel and specialists and also the question of coordination of efforts aimed at method support of the teaching of the legal disciplines.

Performance of these measures could become more effective if the process of legal training of personnel were made continuous. There is a need to introduce and develop the guided self-education of personnel. To that end educational institutions for improvement of qualifications, jointly with legal staff services of ministries and departments, should work out curricula covering the period the students study so that they can independently study legal matters related to their professional activity, should extend the necessary aid to supervisory personnel and specialists, and should provide the relevant consultations. The legal training of personnel and the prevention of legal infractions could also be promoted if fulltime teachers of educational institutions for improvement of qualifications did consulting in enterprises and organizations. Observance of socialist legality and law and order in all spheres of economic activity is an indispensable condition for successful performance of the tasks of the 11th Five-Year Plan. The effectiveness of work in this area depends in large part on the joint coordinated efforts of the USSR Ministry of Justice, USSR Minvuz, sectoral ministries and departments, and educational institutions for improvement of qualifications in carrying out unified and purposive measures to improve the legal training of supervisory personnel and specialists.

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EDUCATION

DETERMINATION OF VUZ STUDENT-TEACHER RATIOS EXAMINED

Moscow EKONOMICHESKIYE NAUKI in Russian No 9, Sep 82 pp 84-88

[Article by R. Kigel', professor, Vinnitsa: "How to Improve the Determination of the Table of Organization for the Professor and Instructor Staff at Institutions of Higher Learning"]

[Text] In the present-day social division of labor, the sphere of higher education acts as a special, and at the same time one of the largest, branches of labor. At the beginning of the 1980-1981 school year, 883 institutions of higher learning in our country were providing education to 5,235,000 students, including 2,978,000 in day departments; and, respectively, 649,000 and 1,608,000 persons in night departments and correspondence departments¹. In 1980, scientific-instruction work in higher schools was carried out by 480,500 persons, including 17,700 doctors of sciences and 180,700 candidates of sciences. The size of the professor and instructor staff at institutions of higher learning was 390,100 persons, including 17,000 doctors of sciences and 164,500 candidates of sciences, that is, 46.6 percent of all the pedagogical workers in higher schools had learned degrees². Thus, higher schools concentrate a considerable number of our country's workers, especially if one speaks about workers with a high level of proficiency. Modern Soviet higher schools, as was noted by V. P. Yelyutin, to a considerable degree determine the intellectual potential of society as a whole³.

The figures that were quoted explain the unconditional importance of evaluating the effectiveness of the activity of higher schools. To the sphere of higher education, which is viewed as one of the branches of labor, let us apply the overall criterion of the effectiveness of socialist social production, which criterion is determined by the essence of the economic base of socialism. From positions of this criterion, the evaluation of the effectiveness of higher education presupposes a measurement of its influence upon the volume and dynamics of national income, with special emphasis upon the intensive growth factors.

At the same time, the effectiveness of the higher educational system, obviously, cannot be evaluated without relating it to the resources that the institutions of higher learning have at their disposal. The administration of the higher educational system encompasses not only the training and education of specialists, but also the use of the resources in the branch. Therefore one of the tasks of administering higher education must consist in optimizing the correlations between

the results of the activity and the resources that have been consumed to achieve those results. A problem that is of particular importance under present-day conditions is the problem of labor resources, especially if one is considering the highly qualified segment of those resources. Hence there arises the great importance of the planned regulation of the size of the professor and instructor staff at institutions of higher learning.

The mechanism for such regulation includes, first, the methodology for substantiating the norms governing the size of the scientific-pedagogical staff; secondly, a system for norms that have been differentiated by groups of institutions of higher learning; and, thirdly, a methodology for the application of the latter for regulating the number of instructors within the institutions of higher learning.

The time-responsive administration of the resources of higher education, with its orientation on the final results in the national economy, must be based on norms that link together the resources (in particular, the number of instructors) not directly with the final result, but with one of the intermediate links -- the contingent being taught. This approach also forms the basis of a very important normative indicator that is used for regulating the size of the professor and instructor staff at the institutions of higher learning -- the specific number of students taught, on the average, per instructor.

Table 1

Norms for the Number of Students Per Instructor for the U.S.S.R.
Ministry of Institutions of Higher Learning (1979)

Types of institutions of higher learning	Number of institutions of higher learning	Norms for the number of students by forms of instruction			
		Day		Night	Correspondence
		Mini- mum	Maxi- mum		
Universities	8	10.0	12.6	20	53
Polytechnical	7	12.3	13.0	20	50
Engineer-construction	8	11.7	12.7	20	50
Other technical	25	11.5	13.1	20	50
Economic and legal	5	15.0	16.0	21	53
Higher educational institutions in the arts	2	5.0	5.2	6	-
Average. . . .		12.6		20.1	51.3

What, then, is the tendency in the correlation between the increase in the student contingent and the number of instructors, which tendency corresponds to the task of increasing the effectiveness of the instructional and educational process?

If one takes into consideration the increase in the amount of labor required in educational work, which increase is linked with the increase in the number of laboratory classes and with the broader and broader participation of the students in NIR [scientific-research work], one is prompted to conclude that there is a reverse dependency between the effectiveness of the instructional and educational process and the specific number of students per instructor. However, this tendency is opposed by the improvement of the forms and methods of the instructional and

educational process, and by the rise in the level to which that process is provided with technical equipment, that is, the forms of intensifying that process. As a result of the application of the latter, there is a rise in the quality of specialist training (this, obviously, is the main factor), and a reduction in the amount of labor required in the instructional and educational process, which amount of labor makes it possible, with the existing size of the professor and instructor staff, to improve the quality of training and education.

The establishment of norms for the size of the professor and instructor staff at institutions of higher learning must be an instrument for regulating the distribution of personnel among the groups of institutions of higher learning, which differ by their area of specialization and by the structure of their specialties. Herein lies one of the prerequisites for guaranteeing equal objective working conditions irrespective of the peculiarities of a particular group of institutions of higher learning. On the one hand, a very important requirement for norms to regulate the number of instructors must consist in the creation of definite advantages for the institutions of higher learning that are introducing at the most intensive rate the progressive forms of instruction and education.

The system of norms which is being used at the present time was, for the most part, formed more than two decades ago. Starting with the 1956-1957 school year, a procedure was established, in conformity with which the number of instructors was planned on the basis of the norms for the number of students in the day department, per instructor. The norms were established on the basis of the actual correlation that had developed as of 1 January 1955⁴. Subsequently, similar norms were introduced for computing the size of the staff for the night and correspondence departments (1959) and for postgraduate students (1962). The differentiation that had developed for the norms governing the planned size of the professor and instructor staff among the institutions of higher learning and by forms of instruction is characterized, in particular, by the data for the UkSSR Ministry of Institutions of Higher Learning, as summarized in Table 1.

From Table 1 it can be seen that, for the day form of instruction, substantial difference in the norms for the number of students per instructors exist both for groups of institutions, and among the institutions of higher learning within the confines of the groups. Moreover, the most considerable differences in the staff norms developed in the universities.

As has been indicated by a study that was carried out to determine the actual amount of labor required in the educational process (especially for daytime instruction), the generally accepted differentiation of the norms for the number of instructors among the groups of institutions of higher learning and within those groups, under present-day conditions, cannot be deemed to have sufficient substantiation. After the establishment of these norms, new specialties and areas of specialization sprang up, and changes occurred in the structure of personnel training within the individual areas of specialization and in the content of the curricula. All this, naturally, must find its expression when determining the size of the professor and instructor staff.

How, then, should the norms that are necessary for this be established?

Table 2

Computation of the Norms for the Number of Students Per Teacher,
By Specialties and By Institutions of Higher Learning

Institutions of higher learning	Specialties	Student contingent	Average annual teaching load per group	Normative number of students per instructor
I	0501	2,800	1,977	12.7
	0577	1,200	2,083	12.1
II	0606	1,400	1,936	13.0
	0608	1,600	1,895	13.3
III	0705	1,200	2,042	12.3
	1202	1,800	2,149	11.7
Total...	6	10,000	2,010	12.5

When taking into consideration the factors that limit the total number of instructors, the only correct approach seems to be the one with which, proceeding from the assigned staff efficiency for the ministry (department), one carries out the differentiation of the norms according to specialties (as broken down by the forms of instruction), which differentiation takes into consideration the deviation in the amount of labor required for instructional work in the particular specialty (that is, the volume of the teaching load by specialty) in terms of the academic group, from the average value for that indicator in the given totality of the institutions of higher learning. This methodological approach presupposes the use of the following formulae:

$$\bar{L}_g = \frac{\sum L_g \cdot S_s}{\sum S_s}, \quad (1)$$

$$N_s = \frac{N_m \cdot \bar{L}_g}{L_g}, \quad (2)$$

$$N_i = \frac{\sum N_s \cdot S_s}{\sum S_s}, \quad (3)$$

$$N_i = \frac{N_m \cdot \bar{L}_{gm}}{\bar{L}_{gi}}, \quad (4)$$

where L_g , \bar{L}_{gi} , \bar{L}_{gm} are the average annual teaching load for the academic group in the particular specialty, for all specialties at the given institution of higher learning, and at all institutions of higher learning in the ministry (department), weighted by number of students receiving instruction; S_s is the number of students who are receiving instruction: 1) in the given specialty; 2) in all the specialties at the particular institution of higher learning; and 3) all institutions of higher learning in the ministry (department); N_s , N_i , and

N_m are the norms for the number of students per instructor: for the particular specialty, for the particular institution of higher learning, and for the institutions of higher learning in the ministry (department).

Let us illustrate this methodology by making computations (arbitrary figures). Let us assume that the following norm has been established for the ministry or department that has institutions of higher learning: 12.5 students in the day department per instructor on the table of organization ($N_m = 12.5$). It is also known that the number of students who are receiving instruction in the six specialties is equal to 10,000. Let us further assume that there are three institutions of higher learning, each of which has two specialties and a definite number of students (see Table 2).

In order to obtain the normatives that we are seeking, it is necessary, for the given total number of institutions of higher learning, to compute the average annual load placed upon the group, weighted by the size of the contingents, and, taking this as the base, the corresponding average-branch norm, and to establish for each specialty, and then for the institutions of higher learning, the specific norm.

The average annual load for the group will be:

$$\bar{L}_g = \frac{1977 \cdot 2800 + 2083 \cdot 1200 + 1936 \cdot 1400 + 1895 \cdot 1600 + 2042 \cdot 1200 + 2149 \cdot 1800}{10,000} = 2010 \text{ hours.}$$

Thus, the average-branch norm of $N_m = 12.5$ corresponds to 2010 [hours] of average annual teaching load in terms of the academic group. Consequently, the norms that are differentiated for the specialties will be:

$$\begin{aligned} N_{0501} &= \frac{12.5 \cdot 2010}{1977} = 12.7, \\ N_{0577} &= \frac{12.5 \cdot 2010}{2083} = 12.1, \\ N_{0606} &= \frac{12.5 \cdot 2010}{1936} = 13.0, \\ N_{0608} &= \frac{12.5 \cdot 2010}{1895} = 13.3, \\ N_{0705} &= \frac{12.5 \cdot 2010}{2042} = 12.3, \\ N_{1202} &= \frac{12.5 \cdot 2010}{2149} = 11.7 \end{aligned}$$

Finally, we determine, with a consideration of the structure of the specialties, the norms for each institution of higher learning:

$$\begin{aligned} N_I &= \frac{12.7 \cdot 2800 + 12.1 \cdot 1200}{4000} = 12.5, \\ N_{II} &= \frac{13.0 \cdot 1400 + 13.3 \cdot 1600}{3000} = 13.2, \\ N_{III} &= \frac{12.3 \cdot 1200 + 11.7 \cdot 1800}{3000} = 11.9. \end{aligned}$$

According to these norms for the table of organization, the first institution of higher learning will require 320 instructors; and the second and third, respectively, 228 and 252. And if one assumes that, in each of them, the lecture flow consists of four academic groups and the share of the lectures in the average annual teaching load per group is identical and constitutes 25 percent, then the annual volume of teaching work with the students will be: in the first institute, 261,156 hours; in the second, 186,616; and in the third, 205,350. Hence the average annual teaching load per instructor on the table of organization will be, respectively, 816, 818, and 815 hours. Consequently, all the institutions of higher learning are put in practically equal conditions with regard to the expenditures of instructor labor to train the specialists, and this attests to the correctness of the proposed methodology for computing the normative indicators for instructor staffs.

The essence of this methodology, as was previously mentioned, lies in the application of the indicator of the amount of labor required for the training process, differentiated for all the specialties being taught at institutions of higher learning. But the indicator for the annual norm of teaching load per instructor on the table of organization must be used only for computations within the institution of higher learning, that is, for the purpose of distributing the billets for professor and instructor staff that have been approved for the institution of higher learning among the various departments⁵.

The practical implementation of the task of substantiating the tables of organization that are assigned by the ministry (department) to the institution of higher learning can be summarized as the following procedure of computations. First of all one determines the amount of labor required for the teaching process for each specialty, in terms of the academic group. Then, in conformity with formula (1), the volume of the teaching load for the academic group, for all the specialties at the institutions of higher learning, which volume is weighted according to the number of students in daytime instruction who are receiving instruction in each of them, is used to determine the average teaching load per group for all specialties. This indicator, in essence, characterizes the amount of labor that is required, on the average for all the institutions of higher learning, for the teaching process. That average figure corresponds to the normative indicator for the instructor staffs at the institutions, as approved for the particular ministry (department). For example, for UkSSR Ministry of Institutions of Higher Learning, as one can see from Table 1, a staff normative was established that is equal to 12.6 students in daytime instruction per instructor on the table of organization. At the present time that norm is equal to 11.2. Hence, proceeding from formula (2), in order to obtain the normative coefficient for the staffs in the particular specialty, it is necessary to divide the value for the average amount of labor required by the value of the amount of labor required by the teaching process for the particular specialty, and then to multiply the obtained result by the established staff normative for the ministry of department.

Finally, in order to compute the normative staff coefficient for a specific institution of higher learning in conformity with formula (3), it is necessary to take all the staff coefficients for instructors in the specialties that exist at the institution of higher learning, which coefficients have been weighted by the number of students receiving instruction in them, and to divide them by the

overall number of persons receiving instruction at that institution of higher learning. The computed value thus obtained will be the normative indicator of the scientific-pedagogical staffs for the institution of higher learning. As can be seen from formula (4), this indicator can also be obtained by a different manner. For this purpose it is necessary to compute the average value for the particular institution of higher learning for the teaching load, for the academic group in all specialties, in the same way as for computing the average training load per group for the ministry (which was previously mentioned). Then the value of the average training load for the academic group for the ministry must be divided by the value of the average teaching load per group for the institution of higher learning, and the result must be multiplied by the staff normative for the ministry (department).

When establishing staff normatives for individual institutions of higher learning, one cannot avoid the necessity of introducing certain refinements into the computed normative. These refinements are linked primarily with the substantiated differences in the average number of groups and lecture flows, and with the existence (or lack) at the particular institution of higher learning of any additional types of instruction, and with certain other factors.

The computations that were made for the Department of Political Economics, Vinnitsa Polytechnical Institute, according to the methodology that has been described made it possible to derive, for the higher educational institutions of UkSSR Ministry of Higher Educational Institutions, staff coefficients which are, in essence, long-term norms. Recomputation of these norms will be required only when there is a massive re-examination of the curricula, or a sharp change in the student contingents in various specialties, or a change in the norm that is approved for the ministry.

FOOTNOTES

1. See: *Narodnoye khozyaystvo SSSR v 1980 g.* [USSR National Economy in 1980], Moscow, 1981, p 462.
2. See: Yelyutin, V. P., *Vysshaya shkola obshchestva razvitogo sotsializma* [Higher Schools in the Society of Developed Socialism], Moscow, 1980, pp 378, 380.
3. See: *Ibid.*, p 59.
4. See: *Vysshaya shkola. Postanovleniya, prikazy, instruktsii* [Higher Schools: Decrees, Orders, Instructions], Moscow, 1965, Part 2, p 18.
5. Abstracting from the last indicator (which process also simplifies the computations) is determined by the following correlation, which characterizes in the most generalized form the interdependencies among the indicators of the amount of labor required by the teaching process, the annual norm for the instructor's teaching work, the average annual teaching load per student, and the normative indicator for the number of persons in the professor and instructor staff at institutions of higher learning:

$$\frac{Ns_1}{Ns_2} = \frac{Lg_2}{Lg_1}$$

It is typical that this correlation can also be derived from methodologies in which one uses as a base such indicators as the annual norm for the instructor's

training load and the average annual training load per student (see: Daynovskiy, A. B., *Ekonomika vysshego obrazovaniya (planirovaniye, kadry, effektivnost'* [Economics of Higher Education (Planning, Personnel, Effectiveness)], Moscow, 1976; *Metodicheskiye ukazaniya po raschetu shtatov professorsko-prepodavatel'skogo sostava Minvuzov USSR po napyazhemosti uchebnykh planov* [Methodological Instructions for Computing Tables of Organization for the Professor and Instructor Staff at the UkSSR Ministry of Institutions of Higher Learning According to the Degree of Tension in the Curricula], Edited by N. F. Kirkach, A. A. Chugayev, and M. A. Lyubchik, Khar'kov, 1980).

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